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ABSTRACT

This is a handbook designed for carrying out the goals and objectives of Preparation for Raising Educational Performance (PREP), a thematic, remedial program for ninth graders in New York City public schools. The lessons presented in the handbook model an approach to learning which follows the patterns of actual language development: listening, speaking, reading and, finally, writing. The information to be learned is organized in such a way as to explore students' prior knowledge and experience as a foundation for the new concepts to be learned. Section 1 of the handbook outlines the program's objectives, which include thematic organization and minimum learning essentials; cross-curriculum skills; vocabulary development; reading comprehension; writing; and the development of study skills in English/literature, mathematics, science, and social studies. The use of newspapers, assessment and selection of texts, semantic mapping as an assessment tool, and homework are also discussed here. Section 2 provides a base for brainstorming in different content areas, in order to facilitate PREP's thematic approach. Following the brainstorming samples are charts for each of the major content areas showing examples of how one theme (foods) may be related to "Minimum Learning Essentials" in each area. Section 3 provides sample lessons related to the themes of sports/health, business, food, and theatre arts/media. Section 4 illustrates the development of a thematic module using sports, Finally, section 5 explains supportive approaches to the development of reading and writing skills while teaching the content areas of social studies, science, and mathematics. (GC)

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Preparation for Raising Educational Performance

HS
PREP

EXPERIMENTAL

Thematic Planning

Fall '83

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Contents

Section 1 - Meeting the Needs of the PREP Student..............I-1

Section 2 - Integrating a Theme..............................II-1

Section 3 - Sample Theme Related Lessons.....................III-1

Section 4 - Developing a Thematic Unit in Communication Arts...IV-1

Section 5 - Supporting Basic Skills in the Content Areas........V-1

- A. The PREP Student and Social Studies............V-3
- B. The PREP Student and Science....................V-15
- C. The PREP Student and Mathematics................V-26

HS PREP

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Section 1

Meeting the Needs of PREP Students

H S
PREP

THE PROGRAM

The Preparation for Raising Educational Performance, PREP, has been initiated to assist entering ninth graders to realize the same success as their peers: the award of a High School Diploma.

Students have been selected for the PREP program because their current achievements in the communication arts predictably limit their ability to benefit from instruction in all subject areas. As they enter this program, we are aware not only of their test scores but of other very real concerns:

- They have been in remedial programs before and wonder if this one will be different.
- They wonder if high school will be a more fulfilling and successful experience.
- They have struggled not only in communication arts classes, but in science, social studies, and mathematics as well.
- in spite of academic deficiencies, their personal, social, and career goals are the same as those of other ninth graders.

In this program emphasis is on changing attitudes and motivating students to want to come to school. A thematic approach is offered within the context of a full program designed to stimulate interest, to improve academic progress, school attendance, career awareness, occupational skills, as well as to complete all the requirements for a high school diploma.

The basic objectives of the ninth grade curriculum remain unchanged. WHAT these students are taught is essentially what is taught to all ninth graders. HOW these objectives are taught is the focus of this handbook.

The lessons presented in this handbook model an approach to learning which follows the patterns of actual language development: first listening, then speaking, then reading, and then writing. The information to be learned is also structured so that students start with the known and move to the unknown. Thus, lessons begin by exploring students' prior knowledge and experiences as a foundation for the new concepts to be learned.

New concepts are introduced as concrete, reality-based experiences. Students are given multiple opportunities for learning as the lesson proceeds through oral and written, verbal and non-verbal experiences--all related to the same objective. Ultimately, students relate these learnings to the printed text, apply their new learning to the comprehension of the text, and assimilate it into their own knowledge base. With further development--through discussion, writing, research--they are able to extend and criticize what they have learned and then apply that to new learning tasks.

This model of thorough developmental instruction will require a great deal of time. Therefore, you will need to identify those objectives that are essential to the ninth grade and provide necessary preparation for the tenth grade curriculum.

Thematic Organization and Minimum Learning Essentials

Since each school in the PREP program is organized around a career-oriented theme, it will also be advantageous to look at the Minimum Learning Essentials for each academic subject in the light of that theme. Thematically oriented teaching offers many advantages, especially for students whose motivation toward learning has suffered from failure and diminished expectation for success.

By interrelating the subject areas--science, social studies, mathematics, communication arts--with a reality-based theme such as theater-arts, food preparation, business, or health careers and athletics which are illustrated in this guide, we can hope that the student will display a new motivation to succeed. The theory of light in science class, for example, takes on a whole new synergistic attraction when related to the student's class in stage lighting. Being able to read and interpret measurements in mathematics class becomes more meaningful when its relationship to the preparation of a souffle is made apparent. What the PREP student needs is to recognize the importance of learning for living, the importance of academic skills for living a better life, getting a more satisfying job, and making best use of leisure time.

Addressing the basic requirements of the ninth grade curriculum in this light is not easy. It offers the possibilities for generating new creativity in lesson planning. It offers teachers the challenge of interdisciplinary brainstorming and a chance to rethink old methodologies.

Of course, teachers will need to be selective in choosing the objectives that can relate to the theme. Not every objective in every content area can be, or needs to be theme centered. However, where theme and objective are compatible, learning will be reinforced and enhanced.

Skills across the Curriculum

Whether students are reading newspapers, science textbooks, novels or the Driver's Manual, they need the basic skills of reading:

- ability to apply prior knowledge to the content of new reading material
- appreciation of the purpose for reading the material
- understanding of the concept presented in the material
- familiarity with the technical or esoteric vocabulary to be used
- recognition of basic vocabulary common to all textual material
- ability to derive literal and implied meanings from the texts
- ability to apply what has been learned to other situations or texts

The PREP program adapts instruction to each curriculum area so that students will improve each of these basic skills of reaing as they are learning the content of the curriculum. Thus, curriculum content and reading processes are addressed in each lesson.

The particular reading process to be taught will be detrmined by the nature of the subject and by the type of reading material being used. Each curriculum area has its own characteristic text patterns which require special reading skills. Likewise, each area has its own technical vocabulary which must be taught as it relates to the content of the lesson.

For PREP students, therefore, each lesson will need two types of performance objectives:

> Content Objectives: selected from the Minimum Learning Essentials for the ninth grade in a particular curriculum area, and related to the PREP program theme wherever is appropriate.
>
> Process Objectives: vocabulary development and reading comprehension processes required to understand the particular textual material.

The basic processes, for gaining new information and understanding through reading, writing, listening, speaking and thinking have certain commonalities as well as differences among the several content areas of disciplines.

Those skills that are common to all include:

Vocabulary Development:

Word recognition: phonic and structural analysis

Contextual Analysis: semantic and syntactic

Technical Language

Reading Comprehension:

Literal meaning: stated facts, ideas, cause-effect relationships, time-order sequences.

Inferred meaning: implied facts, ideas, cause-effect, relationships, time-order sequences, conclusions, comparisons, distinguish fact from opinion.

Critical comprehension: author attitude; original generalizations; critical evaluations; prediction

Writing: Prewriting activities, drafting, revising, rewriting, editing.

Study Skills:

Selecting, locating relevant information (research)
Organizing information
Reading raphic displays (charts, diagrams, etc.)
Following directions
Previewing, scanning.

In addition, each curriculum area requires processing that is unique. These include:

English/Literature:
Analyzing personality/character traits
Recognizing setting
Recognizing story/theme
Recognizing plot/conflict/resolution
Recognizing literary type or genre
Recognizing stylistic techniques

Mathematics:
Reading mathematical symbols
Following direction (left right; top bottom, etc.) of process
Reading word problems
Reading graphs and other visuals
Reading explanation for processes and principles

Science:
Reading abbreviations, symbols, equations
Reading diagrams, charts, etc.
Reading explanation of technical processes
Classifying data
Recognizing cause-effect relationships
Following directions (sequencing) for an experiment
Reading descriptions for problem-solving

Social Studies:
Reading maps, charts, graphs, etc.
Understanding sequence of events
Recognizing cause-effect relationships
Making comparisons and contrasts
Analyzing personality/character traits
Evaluating events critically.

The integration of these process objectives with content area objectives acknowledge the PREP students' lack of independence in reading and provides continuing guidance and support for reading assignments.

This does not mean that every teacher "teaches reading" but that every teacher includes in the content lesson a review of technical vocabulary and specific instruction in those comprehension processes essential to the students' learning of that material.

Reading and writing are two sides of the same coin. The "reading-writing connection" is not the mere addition of writing activities to reading. Reading and writing are intimately connected.

In order to incorporate writing into all subject areas, teachers should establish routines for students to write regularly--every day, if possible. Motivate the student to use writing as a means of expressing and communicating.

The teacher can best help the student by responding to content and by asking questions which help the student writer to express him or herself more clearly.

Just as the focus of student reading should be primarily on meaning, so too should the focus of student writing be on content and meaning. Beginning writers should be encouraged to concentrate on saying what they want to say without worrying about "error." Concern with conventions and mechanics will come in a revised version.

More detailed explanation of how these skills may be developed within social studies, science and mathematics may be found in Section V of this guide.

PREP AND THE NEWSPAPER

The newspaper provides a read source of expository reading material about subjects of interest to ninth grade students.

This reading material should be carefully selected so that it relates to the themes which the high school is emphasizing. Articles about food, care of the automobile, use of the computer, and the like can be easily found and incorporated into the day's lesson. Furthermore:

- It provides information in depth and detail unavailable through radio and television broadcasts.
- It provides a variety of informative and recreational resources, such as local and international news, human horoscopes, word games, etc.
- It reflects the interests of the adult world.
- It provides topics for discussion and social interaction with peers.
- It is readily available for homework assignments.

Select newspaper articles and features that are of interest to students and relate to the school theme and therefore provide motivation for reading. The format for a newspaper lesson, although shorter than other reading lessons, is essentially developmental and follows this sequence of instruction:

1. **Directed Instruction**: Through oral discussion, introduce the conceptual framework of the story or feature. Use pictures to further stimulate interest, discussion, and understanding. Esoteric or unusual vocabulary is discussed before the students read. Present comprehension questions in advance to guide the students' reading.

2. **Supervised Practice**: Have students read the story either silently or aloud, depending on the length and difficulty of the material. Interrupt the reading periodically to check students' comprehension to that point. Follow reading by either a general discussion of the article, or a period of questioning ex];ocot;u dorected toward a particularly relevant comprehension or vocabulary skill, e.g., recalling facts; identifying synonyms; detecting author's attitude.

3. **Application**: As a homework assignment, or during a subsequent newspaper lesson, students will demonstrate their understanding of the newspaper article through activities such as:

   writing: What do you think happened next?; a letter to the newspaper agreeing/disagreeing with the article;

   dramatization: role play the story itself; recreate a feature such as "Inquiring Photographer";

interview: students interview each other or family members regarding their reactions to the article.

Interview: students interview each other or family members regarding their reactions to the article.

Actual newspapers are available through many sources and need not be the broadly distributed dailies. Local community weeklies are contributed without charge at supermarkets, banks, etc., back copies of school newspapers may be used; encourage students to bring in newspapers from their homes.

For some lessons it would be advisable for all students to be reading the same article. this is not always possible nor is it necessary. Groups of three or four students can share an article as well as a follow-up application project. Read a brief article aloud, or write on the chalkboard.

In whatever way it is used, the newspaper will provide a mature and motivating reading experience.

A sample newspaper lesson is included in Section 4.

ASSESSMENT AND SELECTION OF TEXTS

Assessment of students' learning goes on all the time, in every class. When the teacher says "That's right!" an assessment has been made. When you say "Let's try that again tomorrow," another kind of assessment has been made.

Teachers use both formal and informal evaluations to:

- measure student learning;
- assess the effectiveness of teaching;
- plan further instruction.

Three Basic Approaches

There are three basic types of assessments available to teachers: norm-referenced, criterion-referenced and teacher observation. Each has a distinctive purpose.

Norm-referenced tests, such as the California Achievement Tests* (CAT) provide a comparative view of student's achievement, based on established norms. When the student achieves a grade equivalent of "5.8" on the CAT in reading, this means that his or her total score was comparable to that achieved by students in the "8th month of the 5th grade" in the national norming population. Such a comparison is useful for planning class placements of students.

Norm-referenced grade equivalent scores are NOT intended to suggest the type or level of reading material a student should use.

The grade equivalent score does NOT reveal the reading skills in which a student needs instruction.

The CAT reports students' performance in certain reading skills separately, on the Individual Test Record (ITR), as "category objectives".

Criterion-referenced tests measure individual performance on specific tasks without reference to any other individuals. Just as an individual's height or weight is measured on an absolute scale, without comparison to anyone else, so a student's skills and knowledge may be measured without comparison to any other student or group.

The Degrees of Reading Power Tests* (DRP) are criterion-referenced tests based on one criterion: reading comprehension. A student's DRP scores identify the levels of reading difficulty that the student comprehended without reference to the performance of any other student.

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*College Entrance Examination Board. New York:

"Level of difficulty"..., or readability....of a book or story involves a complex of factors such as the number, length and structure of words, sentences and paragraphs, as well as the frequency of technical or esoteric language. Publishers of reading tests and books evaluate the material according to readability formulas, the results of which are usually expressed as "grade level." however, there is a variety of formulas available. Thus, the passage that one publisher labels "third grade," may be called "fourth" or "second" grade by another publisher using other formulas.

By applying one readability formula, and one continuous scale of values to both the test passages and school textbooks, DRP methodology offers a much closer match between the student's reading comprehension performance and the readability of a particular textbook.

DRP test results will be most useful in helping you select, adapt or reject texts for all types of reading, including works of literature and content area texts. The individual report of the DRP reveals three functional reading levels, all of which are important for the teacher to know.

The independent or free level, at which a student reads with ease and fluency, without assistance, with few word recognition errors and 90% (p.=.90) comprehension.

Books at this level should be made available for:

- leisure reading
- sustained silent reading
- homework assignments
- research projects

The instructional level, is of greater difficulty for the students. At this level, the reader may need some assistance with word recognition and may expect to achieve 75% (p.=.75) success in comprehension.

Books at this level can be used during periods of instruction, with teachers' direction and support, including:

- development of an understanding of the purpose of the reading assignments;
- discussion of the major concepts - presented in, or presumed by the passage;

- comprehension questions presented in advance which will guide the student's reading to significant issues;
- review of concepts, vocabulary and comprehension questions after the reading;
- follow-up activities which reinforce all aspects of the instruction above.

The frustration level identifies material that is so difficult for the students that many word recognition errors are made, and comprehension would not exceed 50%)p.-.50). That is, these students have a minimal chance of successfully reading material at this level. These students cannot use these stories or texts for either instructional or independent reading. You may, however, judiciously select interesting stories or relevant textual material at the students' frustration level for oral reading to them. This would be a way to:

- share interesting stories that they are not yet able to read;
- expose students to more advanced vocabulary and concepts;
- initiate higher level comprehension processes (e.g., critical, inferential) through listening and speaking about them;
- teach specific content area material from texts the students cannot yet read.

The Individual Report of the DRP will indicate these three reading levels for each student. You can match the DRP unit value of any book with the appropriate DRP score of the students, with confidence that the match will probably be valid for the purpose intended.

DRP values of many textbooks used in schools throughout New York State may be found the Degrees of Reading Power Readability Report.*

You may also compare the texts you have with the sample passages on the back of the DRP Individual Report to help decide the suitability of a book for certain students.

Note: At times it may be necessary to use a textbook whose readability exceeds the students' DRP instructional range. In that instance, you will need to provide a great deal of introductory material and supportive experiences, (charts, maps, trips) and minimize reliance on the text itself.

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* College Entrance Examination Board/New York: (published annually)

Teacher observation, including tests you construct, is certainly the most relevant approach to assessment. Your assessment - by formal test or informal observation - has the unique advantage of being directly related to the instruction that has actually been provided. No published test can do this as accurately.

you will maximize the effects of your own observations and tests by keeping in mind these principles:

- A lesson worth teaching is worth testing; teaching is completed when learning has been demonstrated.
- Just as teaching employs a variety of strategies, so should testing enable students to use writing, speaking three dimensional displays to demonstrate their learning.
- Just as teaching trains a variety thinking/reasoning skills, so should testing assess literal understanding interpretive thinking and critical reasoning.

Teachers' observations and tests are most likely to provide an ongoing assessment that is integrally related to instruction. A good test is a good teaching tool: this is clearly illustrated by the technique known as "semantic mapping," "webbing" or "networking."

SEMANTIC MAPPING AS AN ASSESSMENT TOOL

Semantic mapping, which has its roots in the recent research effort of Dale Johnson* and others, is a way of examining the cognitive processes of students. In its practical application for classroom use, semantic mapping is a powerful strategy for assessing students' prior knowledge in terms of their concepts, knowledges, linguistic facility, and comprehension skills. The map can be extended at the end of the lesson to evaluate what has been learned on the same topic.

As an assessment tool, semantic mapping can be used:

- to determine students' prior knowledge on the topic to be taught;
- to observe how individual students think;
- to note students' facility with language.

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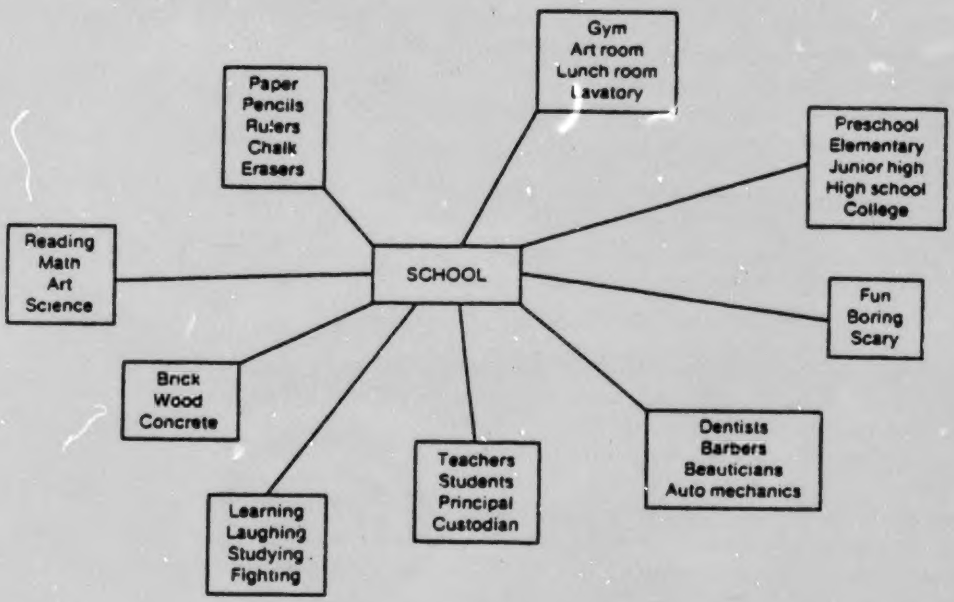
*Dale D. Johnson, Three Sound Strategies of Vocabulary Development: Ginn Occasional Papers No. 3 (Ginn and Company, New York: 1980).

- to identify students' perceptions and misconceptions, that is, to determine whether or not students are "on the right track";
- to note whether one student's response triggers other students to look at the topic differently, that is from another perspective;
- to learn to what extent students are able to interrelate new concepts and vocabulary;
- to assess (evaluate) what new information/understanding has been gained at the end of the lesson.

Semantic mapping does not stop at this type of initial assessment, but continues to be utilized as a teaching/learning took throughout the module. it is suggested that you keep the semantic map on the chalkboard or chart for easy reference.

You may need to clarify students' ideas by probing their individual responses.

The diagram below illustrates the unlimited associations that may be made from the central topic, and the additional members of each sub-topic.


SCHOOL
Gym
Art room
Lunch room
Lavatory
Paper
Pencils
Rulers
Chalk
Erasers
Preschool
Elementary
Junior high
High school
College
Reading
Math
Art
Science
Fun
Boring
Scary
Brick
Wood
Concrete
Dentists
Barbers
Beauticians
Auto mechanics
Teachers
Students
Principal
Custodian
Learning
Laughing
Studying
Fighting

The "mapping" or "webbing" process needs time for discussion and development. This will contribute to the depth and breath of vocabulary development and comprehension, as well as help students identify unknown words and learn new meanings of known words.

HOMEWORK

Students will benefit greatly from the development of techniques for maintaining good study habits. To this extent, the completion of homework assignments should be viewed as a goal for this year.

Homework calls for attitudes and skills that evolve from the student's experiences in schoolwork, i.e., interest, self-confidence, self-discipline and the compentence to perform the task assigned. Therefore, in planning homework assignments for these students, teachers need to consider:

- Relevance: homework should reflect and reinforce what has already been fully explained and under stood in school; the purpose of the assignment, should be clear and students should have all materials available at home, or know exactly where to find them.

- Competence: The students should have had prior success in the topic or design of the homework assignment, so that they will be prepared to do the work independently.

- Time: The length of time required for the assignment should realistically conform to the students' present capabilities for the maintenace of a sustained effort. It is suggested that homework assignments in the first month of the year require no more than 20 to 30 minutes for completing (all subjects included). As students expereince success and improved work habits, this time limit can be gradually extended.

- Materials: Reading assignments (in all content areas) should be selected from texts at the students' independent reading levels. While they may be able to read a particular text in class, with teacher support, that same text may be too difficult for them to read at home without help.

- Response: Students' homework should be reviewed and commented upon (constructively, of course) and returned promptly. The teacher's thoughtful response to the students' effort will provide a most effective model for work habits.

Homework is another learning experience for the students and should not seem to be another testing experience. Properly planned, completing an assignment independently and successfully can have an enormous impact on a student's academic and personal growth.

SUMMARY OF ASSESSMENT FOR INSTRUCTIONAL PLANNING

Effective instruction should be flexible enough to change as needs change. To this extent, standardized group tests can provide only cues for the ongoing evaluation that must be done in the classroom.

Teacher-made tests have the advantage of being able to test the student's learning of the material that has actually been taught. In addition, you are in a unique position to observe distinctions between a student's knowledge and that student's performance on a test, which may or may not coincide.

The teacher will find the periodic review of these assessments -- even the reconciliation of conflicting results -- a vital resource in the planning and delivery of relevant and effective instruction.

Section 2

Integrating a Theme

HS PREP

For those teachers chosen to work with PREP students, the challenge is a particularly exciting one -- inviting a new point of view about familiar content areas. The theme around which your particular PREP program is planned is the key to more stimulating learning activities and lesson planning. Ideally, the teachers of social studies, communication arts, science and mathematics would have an opportunity to brainstorm together in what ways their subject area relates to the school's theme. For example, if food preparation is the focal theme, teachers of mathematics will find their lessons on measurement -- particularly in metric units -- all the more meaningful when related to the food laboratory. So also, the student's new-found interest in food preparation as a possible profession will throw new light on the newspaper in communication arts classes where restaurant reviews may be studied. So also, the science teacher may underline his or her own lessons on the effects of heat on molecular structure by relating it to cooking.

While no one envisions an unnatural warping of the required curriculum in any of the four major areas, still the possibilities for awakening the interests of students who have not had a history of success are unlimited. The key is brainstorming among yourselves. As an idea, we offer here a few brainstorming charts, some unfinished for you to complete.

Following the brainstorming samples, there are charts for each of the major content areas showing samples of how one illustrative theme (FOODS) may be related to the objectives of the Minimum Learning Essentials in each subject area. The process which these charts exemplify is as follows: First, identify the subject area topic related to the theme; then develop content objectives based on topic and theme; thirdly, develop reading; as a final step, the ideas for activities are developed into full lessons. In Section 3, you will find some sample lessons developed through this process of relating objectives to theme.

COMMUNICATION ARTS

1. Understanding of others: party planning
   party manners
2. Oral Interpretation: Sales pitch for a product (TV or dept. store)
3. Critical listening: critique of sales pitch
4. Newspaper skills: restaurant reviews
5. Critical reading: -articles on eating problems
   -food labels
   -food advertisements
6. Mass media: TV review of a restaurant
7. Biography: live of Vatel
8. Short story: "Ice Cream Soda"

SCIENCE

1. Measurement
2. Safety in kitchen (food label)
3. Effects of salt in boiling an egg
4. Microwave and solar cooking versus traditional heat
5. Steaming (laws of convection)
6. Effects of lighting on food's attractiveness
7. How salmonella develop
8. Effects of heat and cold on certain foods

FOODS

SOCIAL STUDIES

1. Geography, food production and the rise of civilizations, (e.g., Sumer, Egypt)
2. Early agricultural methods/technology
3. Dietary laws of major religions (Judaism, Christianity, Islam)
4. "Bread & Circuses" in the Roman republic
5. Lead poisoning and the fall of Rome-recent archaeological findings
6. Role of colonization in feeding the population of ancient Greece
7. Diets/eating habits of ancient/medieval peoples
8. Cultural diffusion of indigenous crops (e.g., Inca's white potato transplanted to europe)
9. The Crusades and Europe's introduction to sugar & spices
10. Organization of Society of Food Production (e.g., feudalism)
11. Importance of corn in ancient Mesoamerica
12. Sexual stereotyping in food careers
13. Louis XIV as a gourmand
14. Urbanization, effects on rural areas
15. Agriculture among the Incas

MATHEMATICS

1. Equating metric and English measure
2. Doubling and halving recipes
3. Money management (consumer training)
4. Computing costs of portions
5. Survey of favorite foods (probability & statistics)
6. Budgeting for family and business
7. Areas - planning an efficient food lab

THEATRE ARTS

COMMUNICATION ARTS

1. Reading and discussing scenes and one-act plays
2. Listening to play reviews on TV
3. Reading reviews in newspapers and magazines
4. Role-playing an actor's audition
5. Planning and writing a "playbill" for a school or class function
6. Writing a TV commercial
7. Writing original scenes
8. Improvising scenes

SCIENCE

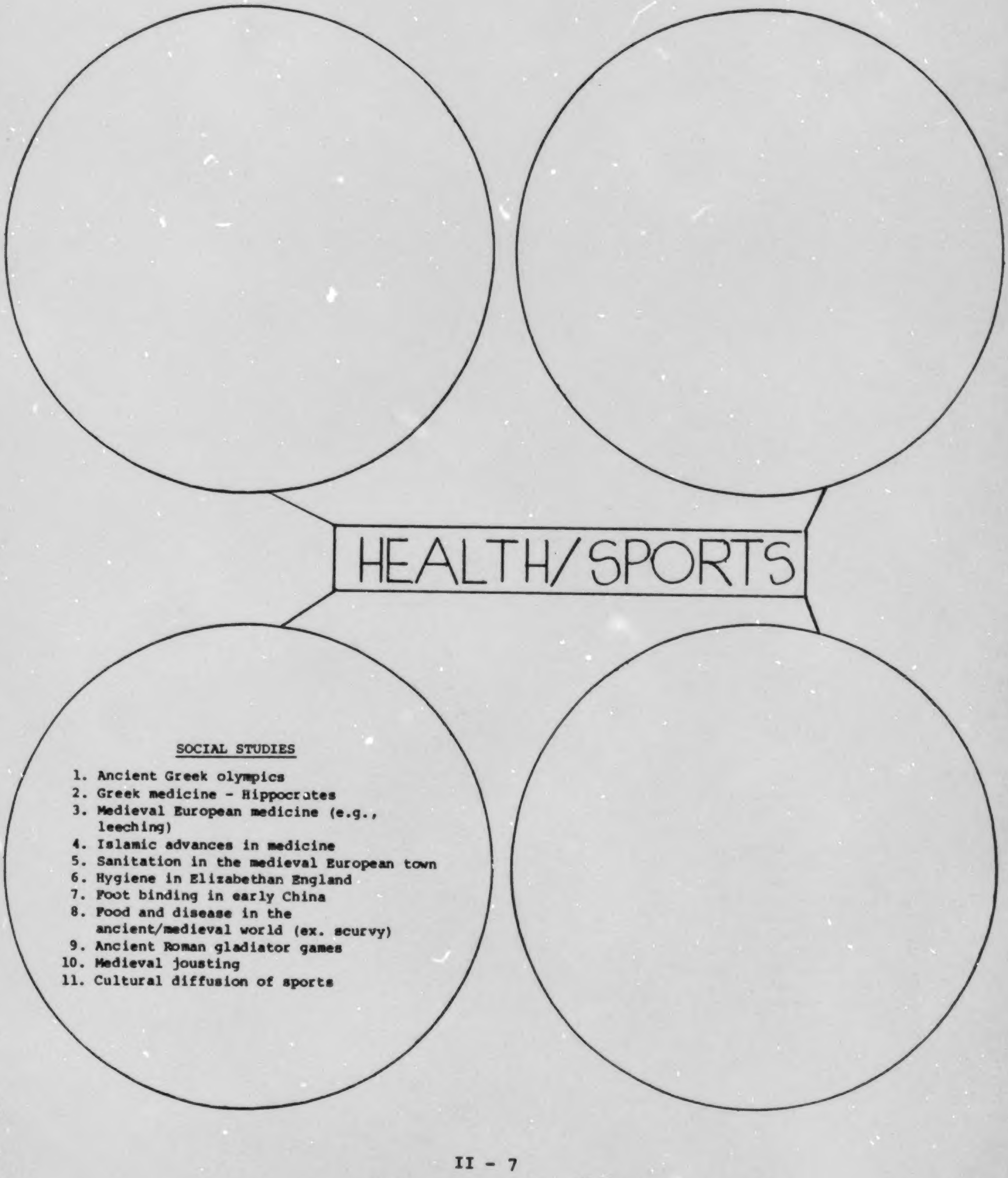
1. Stage lighting
2. Special effects in theatre (fake smoke)
3. Lenses on cameras and stage lights
4. Effects of heat loss on hot stage
5. Sound: measuring decibels
6. Mirrors
7. Chemistry: -paints (why milk paint on flats?)
   -props (color and consistency are everything)
8. Physics: the concept of pulleys; sandbags, curtains

SOCIAL STUDIES

1. Greek drama (e.g., Euripides & Sophocles)
2. Roman drama (e.g., Terence & Plautus)
3. Elizabethan drama (e.g., Shakespeare)
4. Japanese Kabuki & Noh theatre
5. Archietecture of the theatre (Greek, Roman & Elizabethan)
6. Medieval passion and mystery plays
7. Modern plays with historical themes (e.g., "A Man for All Seasons")
8. Oral reading of teacher-written plays
9. Origin of the proscenium
10. Sexual stereotyping (women did not perform; when the did, they were ostracized)
11. Effects of the theatre on politics (e.g., Uncle Tom's Cabin, Moliere

MATHEMATICS

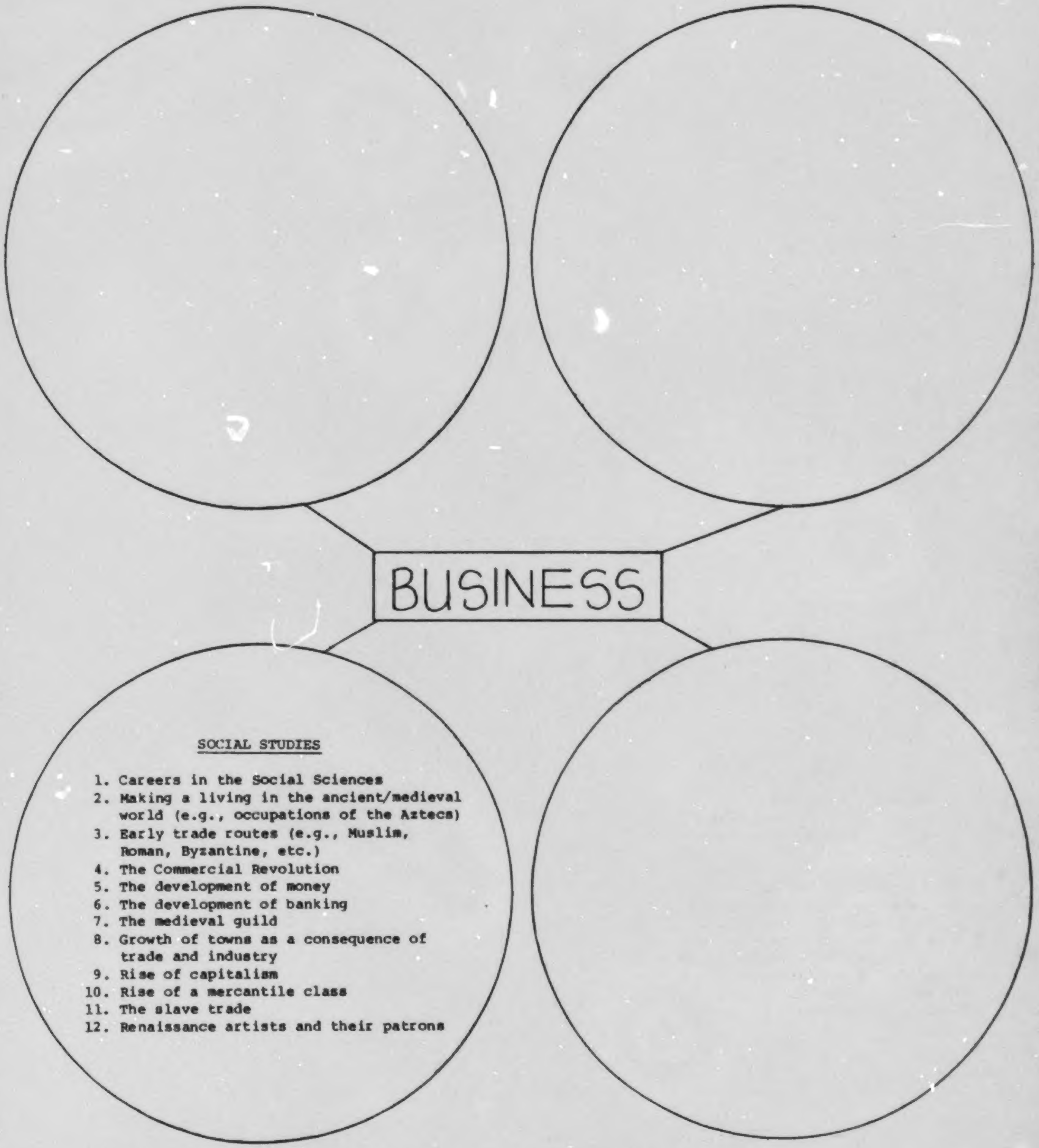
1. Measurement: stage design; building sets and furniture
2. Planning the budget for a show (royalties, set, costumes, printing, publicity, advertising)



HEALTH/SPORTS

SOCIAL STUDIES

1. Ancient Greek olympics
2. Greek medicine - Hippocrates
3. Medieval European medicine (e.g., leeching)
4. Islamic advances in medicine
5. Sanitation in the medieval European town
6. Hygiene in Elizabethan England
7. Foot binding in early China
8. Food and disease in the ancient/medieval world (ex. scurvy)
9. Ancient Roman gladiator games
10. Medieval jousting
11. Cultural diffusion of sports



BUSINESS

SOCIAL STUDIES

1. Careers in the Social Sciences
2. Making a living in the ancient/medieval world (e.g., occupations of the Aztecs)
3. Early trade routes (e.g., Muslim, Roman, Byzantine, etc.)
4. The Commercial Revolution
5. The development of money
6. The development of banking
7. The medieval guild
8. Growth of towns as a consequence of trade and industry
9. Rise of capitalism
10. Rise of a mercantile class
11. The slave trade
12. Renaissance artists and their patrons

RELATING OBJECTIVES TO THEME IN COMMUNICATION ARTS: Food

Newspapers	Students will gain information from newspapers. Students will study different sections of newspapers	Students will: . determine meaning of key words from context. . determine main idea of the selection. . compose a letter of request. . compare and contrast functions of various sections of newspapers. . identify different styles of writing used by newspapers.	. Compare and contrast an editorial on U.S. sale of wheat to USSR with article on using wheat in preparing various dishes. . Have students bring in an article on diets and discuss why they think the diets are good or bad. . Clip recipes of favorite foods from newspapers and exchange with other students. Discuss foods of different ethnic backgrounds. . Clip review of restaurant in the Daily News. Discuss categories of restaurants and compare them with those known to students. . Have students clip and bring in coupons. Have them exchange with each other for products used in their homes. Construct a "coupon" bulletin board or a box where coupons can be deposited for exchange. Discuss the value of using coupons.

THEME RELATED TOPICS	COMMUNICATION ARTS CONTENT OBJECTIVES (MLE'S)	READING/WRITING PROCESSES	SUGGESTED ACTIVITIES
Illustrations, cartoons, charts	Students will interpret the implicit message in illustrations, cartoons, and charts	. identify the subject of an illustration, cartoon, and chart . identify the explicit and implicit meaning of an illustration cartoon, and chart . write a personal reaction to an editorial cartoon	. Cut out various illustrations, cartoons, and charts related to food. Discuss the reasons for these, the effectiveness of the "message" involved, the story behind them. . Read an article related to foods found in a newspaper. Draw a cartoon, illustration, or chart related to the article. . Share writing about food related editorial cartoon (e.g., cartoon about U.S. sale of wheat to USSR) for purposes of revising and publishing student writing as well as for information. . "Read" a chart about food production in the U.S. Interpret the "message" of the chart. Read an expository piece of writing about the same subject. Discuss the ideas inherent in both the chart and article. Compare the strengths of each of the two means of transmitting information.

THEME: FOODS

THEME RELATED TOPICS	COMMUNICATION ARTS CONTENT OBJECTIVES (MLE'S)	READING/WRITING PROCESSES	SUGGESTED ACTIVITIES
Television	Define the role of sponsor commercial television	• identify the purposes of "sponsorship" in commercial television • evaluate the "truth" in advertising of television commercials. • write a letter to a sponsor requesting information	• View several television programs which advertise foods. For each, analyze the interrelationship and the interaction among the following: • type and quality of program • type and quality of commercials • characteristics of target audience • kinds of decisions which sponsors make • Read the ingredients from the labels of several brands of breakfast cereal advertised on commercial television. Compare what is included in the commercial message. Write a report on the findings to share with the class. • Write letters to food companies asking for: (1) nutritional information or (2) registering a complaint or (3) participating in a contest • Write or deliver orally a commercial which advertises a product the students favor. Indicate the target audience for the commercial.

Selected Grade Nine, General Science Learning Objectives (as they relate to the Theme - Foods)

MEASURING & SAFETY

The student will:

Recognize the need for proper handling and use of equipment.

Define volume as the space occupied by a substance.

- Read in gram units the metric scale on the three beams of a balance.
- Design an experiment to test a hypothesis.

HEAT

- Identify some common forms of energy such as heat, light, electricity, nuclear and chemical energy.
- Define energy as the ability to do work.
- Demonstrate that energy can be changed from one form to another.
- State that heat energy can be transferred from one area to another by correction, conduction and radiation.
- Use a calorimeter to measure heat.
- Apply the principlals of heat transfer to methods of preventing heat loss.
- Recognize that different materials transfer heat at different rates.
- State that heat flow can be slowed down by use of insulating materials.
- List various types of insulating materials.
- Distinguish between heat and temperature.
- Relate heat expansion of matter to an increase in the velocity of molecules.
- Apply their knowledge of the characteristics of heat energy to the design of home heating systems.

LIGHT

- Identify light as a form of energy.
- Interpret the spectrum to show that white light is made up of colors.
- Discuss how concave and convex lenses focus light.
- Classify objects as either opaque, transparent or translucent.
- Describe the pheonomenon of optical illusions.
- Identify the parts of the electromagnetic spectrum (invisible light.)

MATTER & CHEMISTRY

- Define matter as anything that has weight and takes up space.
- Identify the states of matter as: solid, liquid or gas.
- Define a compound as being made of two or more elements chemically combined in a definite proportion.
- State that a compound differs in properties from the elements of which it is made.
- Relate chemical energy to heat and light energy.
- Relate compound formation to changes in chemical energy.

ENERGY FOR THE FUTURE

- Define the term "non-renewable" as relating to fossil fuels.
- Justify the need to conserve energy.
- Relate the roles of government, industry, and consumers in conserving energy.
- Describe various techniques available to expand our supply of energy including use of renewable sources.

HEALTH AND DISEASE

- Identify the leading causes of death in the Unites States.
- Categorize and differentiate between infectious and non-infectious disease.

Non-Infectious Disease

- Generalize on the relationship between age and deaths due to circulatory diseases.
- Describe the symptoms of a heart attack.
- Relate the factors that contribute to the health of the circulatory system.
- Describe the current concern about the role of environmental agents and the causes of cancer.
- List the early warning signs of cancer.
- Describe the importance of early detection.
- Identify methods of treatment.

Infectious Disease

- Associate the environment with the presence of different microorganisms.
- Relate disease to harmful microorganisms.
- Identify pathways through which disease producing organisms may enter the body. Give example of organisms which enter through each pathway.
- Identify several methods by which disease causing organisms are transmitted including droplet, infection, direct contact and carriers.
- Identify the body's lines of defenses against disease.
- List the conditions bacteria need for growth.
- Identify the three main types of bacteria.
- Relate environmental and medical factors to incidence of disease.
- List some characteristics of viruses.
- Discover the locations of significant community health agencies.

RELATING OBJECTIVES TO THEME IN SCIENCE: Food

THEME-RELATED TOPICS	THEME-RELATED CONCEPTS	PROCESSES AND/OR SKILLS	SUGGESTED ACTIVITIES
1) . Use a calorimeter to measure the heat given off by burning food (cooking oil).	. A calorimeter is used to measure heat in a given food sample. . Different foods supply different amounts of heat/unit volume.	. Read for sequence in a set of directions. . Recording data in a laboratory report	. Students assemble and use a simple calorimeter to measure heat energy in a burning food sample (cooking oil). Lesson 4, General Science, Grade 9 Theme II, Unit 2
2) . Design an experiment to test a hypothesis.	. Problems in science are often resolved through experimentation (the scientific method).	. Giving directions for an experiment (sequencing). . Recognizing cause-effect relationships.	. Students develop an experiment which will help answer the questions, "Why do we add salt to water when we boil an egg?" [Lesson 2, General Science, Grade 9, Theme I, Unit 3
3) . Identify the patterns of heat flow in a room.	. Heat is a form of energy that is necessary for our comfort. . Heat can be transferred from one area to another.	. Recording data in an orderly fashion. . Using graphic aids.	. Survey a room (classroom, kitchen, dining area, pantry, etc.) to determine how heat is distributed. Develop a floor plan of the room indicating heat flow patterns. [Lesson 1, General Science, Grade 9, Theme II, Unit 2]

THEME-RELATED TOPICS	THEME-RELATED CONCEPTS	PROCESSES AND/OR SKILLS	SUGGESTED ACTIVITIES
4) . Identify the three main types bacteria. . List materials and procedures that kill or retard the growth of bacteria. . Compare the effectiveness of different disinfectants and antiseptics.	. Different types of bacteria can be identified under a microscope. . Antiseptics retard bacterial growth. . Disinfectants destroy most bacteria.	. Following organized procedures. . Comparing characteristics. . Analyzing critically.	. Compare the effectiveness of various antiseptics on cultures of non-pathogenic bacteria. Study advertising claims as they relate to various antiseptics and disinfectants. [Lesson 4, General Science, Grade 9, Theme II, Unit 3]

SOCIAL STUDIES

To heighten student interest in the subject areas, the High School PREP Program proposes that subject content be related, where possible, to a school selected theme. While some themes can be related more easily than others to topics in the 9th Grade Global History course of study, it is possible to plan a number of social studies lessons around any given theme. This is so because history is the study of humankind's experience, and almost any theme will relate to some aspect of that experience.

For example in this guide the teachers teach of a PREP program in a school which selected "The World of Food" as its theme, would find that the Global History curriculum (the study of humankind from ancient times through 1500 A.D.), has several topics related to food. Indeed the rise of civilizations around the world was based on the development of a sedentary agriculture. Not until a way was found to produce a surplus of food were some individuals in society free to engage in other activities, e.g., the arts, business, trade, scholarship and teaching. The civilization of the Incas in South America is a case in point. Not only does Inca society illustrate the realtionship between food, agriculture and the rise of civilization, but the white potato, which originated with the Incas, had through cultural diffusion a global impact on the eating habits of people the world over.

Once a theme-related Global History topic, such as the cultural diffusion of the Inca's potato, has been selected, performance objectives should be written. that is, the teacher decides what students will be able to do as a result of the lesson. since High School Prep students are reading below grade level, special attention must be paid to helping them improve their reading and writing skills. Specific "Reading/Writing Objectives," therefore, ought to be included in the lesson plan.

After a motivational strategy, through which students discover that some of their favorite foods, like the ubiquitous french fry, originated neither in the United States nor in Europe, they should raise significant questions about the potato's origin. These questions then guide students' reading of a passage about the potato's origin and travels.

To facilitate comprehension, students should be prepared for the reading by being introduced to some of the more troublesome vocabulary in the passage. each word might be used in a sentence written on the chalkboard that includes a contextual clue to its meaning. Students should be asked to determine the meaning of each word from the way it is used in the sentence. In addition, because the reading selection mentions several countries on several continents, students should, again prior to reading, be asked to locate each place on a world map.

After reading the selection, student comprehension can be checked by having them put the movements of the potato in chronological order. they can be asked to trace the potato's travels on the world map. Students could then be asked higher level questions which require them to make inferences about the potato as an example of cultural diffusion and about the potato's influence on Irish migration to the United States.

Finally, since the writing skills of High School PREP students also need improvement, they could be asked to write a paragraph describing how any food, other than the potato, found its way to the American table.

RELATING OBJECTIVES TO THEME IN SOCIAL STUDIES: Food

THEME-RELATED TOPICS	SOCIAL STUDIES CONCEPTS	SOCIAL STUDIES CONTENT AREA OBJECTIVES	READING AND WRITING OBJECTIVES	SUGGESTED ACTIVITIES
Early Civilizations --South and Mesoamerica	. Culture . Cultural Diffusion	Students will be able to: . locate on a map how the potato got from Peru to Ireland and back again to the "New World." . describe how a food (potatoes), which originated in the "New World," became a common food for people around the world. . explain how this exchange of the potato between the New World and Europe is an example of cultural diffusion. . explain how the potato influenced Irish migration to the United States.	Students will be able to: . select the main idea of a reading selection . find supporting details. . determine meaning of vocabulary from context. . place the various movements of the potato in sequential order. . draw inferences from the reading selection. . write a paragraph describing how any food, other than the potato, found its way to the American table.	. With specific guiding questions, students read passage, describing the global impact of the potato. . Students define difficult vocabulary words using contextual clues. . Students locate on world map countries mentioned in reading selection. . Students trace on world map the route of the potato from Peru to Ireland and back again to the "New World." . Students select appropriate title for the reading selection. . Students place the potato's movements in sequential (chronological) order. . Students explain how the exchange of the potato between the New World and Europe is an example of cultural diffusion. . Students explain how the potato influenced Irish migration to the United States.

THEME-RELATED TOPICS	SOCIAL STUDIES CONCEPTS	SOCIAL STUDIES CONTENT AREA OBJECTIVES	READING AND WRITING OBJECTIVES	SUGGESTED ACTIVITIES
The Rise of Early Civilizations -- Egypt	• Environment • Population Distribution • Culture	Students will be able to: • compare and contrast the lands of Egypt before and after the Nile floods. • describe the importance of rivers in the emergence of agriculture. • explain why many ancient civilizations developed around river basins. • interpret and label a map showing the various parts of the Nile River system. • explain why Egypt has been called "the gift of the Nile." • analyze Egyptian religious beliefs connected with the Nile.	Students will be able to: • interpret photographs • read for the main idea and supporting details • determine the meaning of vocabulary from context. • recognize geographic features. • draw inferences from the reading selection.	• Students compare and contrast two photographs showing the cracked river bed of the Nile in the dry season and the fertile Nile Valley after the river floods. Students use map of the Nile to label the various parts of a river system (i.e., mouth, source, delta, etc.). • With specific guiding questions, students read passage which explains ancient Egypt as "the gift of the Nile." • Students define difficult vocabulary words in the reading using contextual clues. • Students read "Hymn to the Nile," a primary source, in which Egyptians address the Nile as a god. Based on it, students make inferences about Egyptian religious beliefs.

THEME-RELATED TOPICS	SOCIAL STUDIES CONCEPTS	SOCIAL STUDIES CONTENT AREA OBJECTIVES	READING AND WRITING OBJECTIVES	SUGGESTED ACTIVITIES
Religions of the Middle East Islam	. Culture . Customs . Diversity . Cultural Diversity	Students will be able to: . state 5 basic ideas of Islam, including ideas about diet and fasting. . compare and contrast the dietary customs of Islam with those of Judaism and Christianity. . explain how the beliefs of Islam are, in part, a result of cultural diffusion. . describe the influence of geography on Islam. . analyze the role of dietary laws in organized religion.	Students will be able to: . select the main idea of a reading selection. . find supporting details. . determine the meaning of vocabulary from context. . interpret a cartoon depicting violations of Islam. . locate the Arabian Peninsula (birthplace of Islam) and recognize its position in relation to Jewish and Christian trade routes. . draw inferences from a reading selection. . write a letter explaining the importance of religious dietary laws.	. Students use a map of the Middle East to locate the Arabian Peninsula and discuss its position in relation to trade routes traveled by Jews and Christians. . With guiding questions, students read a passage describing the major beliefs and customs of Judaism, Christianity and Islam. They compare and contrast the major ideas of these three religions. . Students choose a title for the reading selection. . Students define difficult vocabulary words using contextual clues. . From a cartoon, "The Man Who Came to Dinner," students identify violations of Islam, including violations of dietary laws. . Students use the map and reading to draw conclusions about the extent to which Islam "borrowed" from the other two great world religions. . Students, in the role of Christians, Muslims, or Jews, write a short letter to a non-believer, explaining the importance of religious dietary laws.

THEME-RELATED TOPICS	SOCIAL STUDIES CONCEPTS	SOCIAL STUDIES CONTENT AREA OBJECTIVES	READING AND WRITING OBJECTIVES	SUGGESTED ACTIVITIES
Early Agricultural Methods -- e.g., Sumer's invention of irrigation	. Environment . Technology			
Feudalism (as a way to organize society for food production)	. Land Distribution . Adaptation . Roles . Cooperation			
The Fall of Rome Recent Theory, Based on Archaeological Findings, that Lead Poisoning contributed to Rome's Fall.	. Civilization . Environment . Change			
Diet/Table Manners at a Medieval Banquet	. Culture . Customs . Adaptation			

RELATING OBJECTIVES TO THEME IN MATHEMATICS: FOODS

PERFORMANCE OBJECTIVES (FUNDAMENTALS OF MATH I)	ACTIVITIES	PROCESSES/SKILLS
Unit I: Formulas	Students will be able to:	
Lesson 2. *Translate a phrase containing one or more variables into an algebraic expression (p. 4).	a) Read a verbal statement involving prices of several food items and total price and express relationship as an algebraic expression. b) Evaluate the total price of food items given individual prices.	Reading, identifying variables, translating key English words into algebraic symbols, substituting values for variables, arithmetic, applying order of operations.
Lesson 4. Evaluate numerical expressions with parentheses (p. 10).	Compare algebraic expressions with and without parentheses and judge which best represents verbal situation involving cost of food, weight of food items or volume of food items.	Evaluating algebraic expressions, applying order of operations, judging appropriateness of answer in real-life situation.
Lesson 5. Express a number written in exponential form as a repeated multiplication (p. 12).	Compute the number of sugar cubes stacked in a rectangular solid with an equal number of cubes on each side (or brownies). Express the number of cubes in exponential form and calculate.	Computing volume of a cube, expressing n^3 as n x n x n.
Lesson 7. State a need for using formulas (p. 16).	Discuss changing a recipe, to double or triple it or halve it, and writing a formula to represent, in general, total weight of ingredients.	Representing quantities with variables, translating relationships and operations into algebraic notation.

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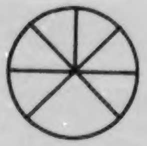
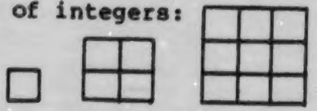
*Refers to lesson number in Fundamentals of Math: Part I.

PERFORMANCE OBJECTIVES (FUNDAMENTALS OF MATH I)	ACTIVITIES	PROCESSES/SKILLS
Unit II: Introduction to Algebra	Students will be able to:	
Lesson 1. Use symbols of equality and inequality to compare two whole numbers. p. 23.	Read food ads and compare prices of same items in different stores. Read weights and volumes on comparable food packages.	Reading, recognizing units of measure, writing symbol = to express relationships between whole numbers.
Lesson 3. Recognize when two rational numbers are equivalent (denominators 2, 4, 8, 16) p. 28.	Compare slices of a pie or cheese wedges, expressing them as fractions of the whole with denominators 2, 4, 8, 16.	Writing fractions, comparing numerator, using = to express relationships between fractions.
Lesson 4. Compare length of line segments. p. 31.	Measure sticks of spaghetti, strings of licorice, etc., and compare lengths.	Using a ruler, use = to compare length.
Lesson 5. Represent gains and losses as signed numbers. p. 34.	Use signed numbers to show gains and losses in food prices, food weights, food volumes, people's weights.	Translating changes into algebraic notation using signed numbers.
Lesson 10. Add positive and negative numbers on a number line. p. 48.	List changes in food prices, weights, and volumes--on a person's weight.	Combine positive and negative changes by using the number line, compute final price, weight,
Lesson 12. Add rational numbers with. Weigh like denominators and like signs. p. 54.	Weigh food items separately and add weights to find total weight, weight expressed as fractions with like denominators, e.g. eighths of a pound (1/8 lb.). Read weights from food packages and add.	Using scale, reading, adding fractions.

PERFORMANCE OBJECTIVES (FUNDAMENTALS OF MATH I)	ACTIVITIES	PROCESSES/SKILLS
Unit II: Introduction to Algebra	Students will be able to:	
Lesson 1. Recognize the relative sizes of and indicate appropriate uses for the millimeter, centimeter and kilometer. p. 63.	Estimate the sizes of food items, using millimeter, centimeter (e.g., length of spaghetti, licorice, jelly beans, sausages, etc.).	Estimation, recognition of metric units.
Unit III: Metric Measurement	Students will be able to:	
Lesson 8. State that there are 30 grams to one ounce." p. 81.	Weigh food items with ounce scale" and gram scale and compare weights.	Using and reading scale, comparing numbers. Generalizing.
Lesson 9. Convert from grams to kilograms and vice versa. p. 83.	Weigh food items in grams and kilograms. Read weights in grams and kilograms on food packages and convert from one to the other.	Using and reading scale, reading package information, multiplying and dividing by 1,000.
Lesson 10. Convert from grams to milligrams and vice versa. p. 85.	Read nutritional (vitamin) content on food and vitamin packages (cereals, breads) and convert.	Reading package information, multiplying and dividing by 1,000.

PERFORMANCE OBJECTIVES (FUNDAMENTALS OF MATH I)	ACTIVITIES	PROCESSES/SKILLS
Unit IV: Plane Geometry	Students will be able to:	
Lesson 1. Illustrate the importance of geometric shapes. p. 89.	Suggest food items with particular geometric shapes: (rectangular brownies, circular cakes, cylindrical cans, triangular crackers, etc.). Bring in magazine pictures of geometric food items. Make bulletin board.	Shape identification, shape discrimination.
Lesson 2. Select by sight from given diagrams an acute, right, obtuse and straight angle. p. 92.	Identify the types of angles formed when different numbers of cheese wedges are placed together on the vertical projector:  1 = acute 2 = obtuse 3 = straight 1 1/2 = right	Identification of angles visually, division of 360 by 6.
Lesson 4. Determine when an angle is acute, right or obtuse. p. 98.	Form triangles using lengths of spaghetti and identify type of angles.	Identification, understanding definitions, comparing lengths, comparing angles.
Lesson 5. Make a list of squares of whole numbers. p. 100.	Use square candies (licorice) to form the squares of integers:  and determine the number of squares.	Counting, applying the definition of squaring a number, making a chart or table.

PERFORMANCE OBJECTIVES (FUNDAMENTALS OF MATH I)	ACTIVITIES	PROCESSES/SKILLS
Lesson 7. Recognize the special quadrilaterals by their shapes. p. 107.	Suggest, bring in pictures of food items with specific quadrilateral shapes (on food packages or food company logos on packages). Make bulletin board. Use spaghetti to illustrate quadrilateral shapes.	Shape recognition, discrimination.
Lesson 9. Define and draw a radius, a diameter, a chord, an arc, a sector. p. 114.	Cut a cake to show each spatial part of a circle. (Part of icing around edge = arc). Identify pizza slices and cheese wedges as sectors.	Identify geometric figure from its definition, illustrating geometric figures.
Lesson 10. Use fractions and decimal numbers to calculate perimeters of polygon. p. 116.	Measure food packages in fractions and decimals and use to calculate perimeters (flattened boxes, triangular boxes, etc.).	Using ruler, adding fractions and decimals, applying concept of perimeter.
Lesson 12. Measure circumference of common objects using string and ruler or tape measure. p. 121.	Measure a variety of food cans, oatmeal boxes, pie tins, and food items (salami, cucumber, circular cheese packages, etc.).	Using ruler and tape measure. Comparing measurements. Applying definition of circumference.

PERFORMANCE OBJECTIVES (FUNDAMENTALS OF MATH I)	ACTIVITIES	PROCESSES/SKILLS
Unit V: Money Management	Students will be able to:	
Lesson 1. Compute the change when items are paid for by $1, $5, $10 or $20 bills. p. 113.	Compute change on food purchases based upon food ads or class visit to food market.	Subtracting dollar amounts.
Lesson 2. Read and compare samples of supermarket unit price shelf markers to find the best buy. p. 135.	Make a class trip to supermarket to read unit price labels. Record findings in a table or chart. Compare unit prices.	Collecting data. Tabulating data. Comparing dollar amounts.
Lesson 3. State the relationship between pounds and ounces in weight. p. 139.	Use a pound/ounce scale to weigh food items and compare weights in pounds and ounces Read weight on food packages and convert from ounces to pounds and vice versa.	Using and reading a scale. Generalizing between pounds and ounces.

Section 3

Sample Theme-Related Lessons

HS
PREP

Sports/Health–Related Lessons

THEME: Health/Sports CONTENT AREA: Communication Arts

TOPIC A newspaper feature interviews students learning to be Emergency Medical Technicians.

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- Contrast a feature article to a news article in a newspaper.
- Define technical terms related to medical careers.
- Describe the role of a medical technician.

Reading/Writing Objectives Students will be able to:

- articulate the main idea of the feature article.
- underline direct quotations.
- use the dictionary to locate medical terms
- write in complete sentences

MATERIALS

duplicated copies of feature articles;
optional rubber dummy;
booklet from Red Cross on Cardio Pulmonary Resuscitation (CPR).

MOTIVATIONAL STRATEGIES

Display neighborhood newspaper. Point out news articles, editorials, feature articles. Elicit visual differences. Display rubber dummy, if possible. Ask members of class if any have worked with this object. (Or a visit to a Red Cross station may also serve as motivation.) Discuss T.V. programs that feature health occupations. How many occupations can be named?

PREPARATION FOR READING

Introduce vocabulary. Put the following sentences on the chalkboard. Have students define underlined words by using contextual clues.

- A good bedside manner is a technique doctors should acquire.
- Artists use a different technique when they paint with oil.
- Because of his poor circulation his hands were always cold.
- What is the weekly circulation of the Daily News?
- When my brother's heart stopped, the doctor used mouth-to-mouth resuscitation to help him breath.
- Breastbone is another term for sternum.
- If you lacerate the kidneys, they will bleed.
- It is a good idea to lacerate leather with an awl.
- In her exhilaration, she jumped too high.

Discuss the fact that the same words are used in technical and non-technical contexts.

SUPERVISED SILENT READING

Questions To Be Asked During Reading

Do you think this article is about high school students or college students? Is the student who is speaking a boy or a girl? How do you know if the "dummy" is dead? Do you think this happens in real life? What do the colored lights in the dummy mean? Do you know how to check for a heartbeat? Do the students like this class? Can a baby be delivered outside of a hospital? What will happen if the student presses too hard on the sternum?

Questions To Be Asked After Reading

Ask the students to supply a title for the reading selection. Give the class the three choices below. Explain that one of the titles is so big that it takes in more than is found in the reading selection. Another is so narrow it does not cover the main idea. The best title is the one that describes the contents of the reading selection.

How To Save a Life

An E.M.T. Class at Work

An Exciting Career in the Health Field

- What personal traits should a medical technician have?
- Where would a medical technician be employed?
- What other qualifications are required? (e.g., driver's license, state license, 18 years of age or older.)

SUMMARY ACTIVITY

- Divide students into teams.
- Have the students select medical or technical terms.
- Direct them to construct two sentences using the chosen word in a technical and non technical context.

APPLICATION ACTIVITY

- Have students interview an emergency medical technician at the emergency room of a local hospital.
- Write a report describing a typical day in his or her life.
- Write about someone in the family who is in a health career.
- Research jobs in the health field. List at least 20.
- Have students locate a feature article and an editorial in a newspaper.
- Write a brief paragraph on the differences between the two articles or write on "My Experience in the Emergency Room."

COMMENTS TO THE TEACHER

H.S. diploma required.
Students must pass state examination to be certified
Student must be 18 years or older.
The course is one year.

Worksheet Health/Communication Arts

It's the most important class in the school, because it teaches you to save a life," said a New York City high school student.

He and other juniors and seniors were finishing up a yearlong course in emergency medical techniques, offered this year for the first time.

Taking seriously the treatment of an "injured" rubber dummy was hard at first. "It was a big joke," one of the students said.

But they have learned to regard errors and successes, which are indicated by colored lights which are attached to their patients to differentiate between life and death.

"We had to master the A-B-C's of life - airway, bleeding and circulation" he explained, as he began a demonstration of emergency medical procedure.

A quick but thorough survey of the rubber person revealed that it was not breathing. The student cleared her air passage, tilted back her head, and administered four quick breaths in mouth-to-mouth resuscitation.

Then he checked for a heartbeat and announced to his fellow students that there was none. Efforts to revive the heart began immediately with a search for the proper location on the sternum on which to apply pressure to the heart.

"What could happen if you apply pressure to the wrong place?" one of the students asked.

"You could crack a rib..." or "...lacerate the kidney," the teacher explained.

The students who are ready to graduate say they feel both exhilaration and the weighty responsibility that goes with their new training, which includes all the basic skills of ambulance attendents - including delivering a baby, which will be taught at the end of the course.

Upon graduation they may be certified as emergency medical technicians.

Adapted from Sheila Chase, "Students Put Their Hearts into Life-saving class," Staten Island Advance, April 22, 1983, p. C2.

THEME: Health/Sports **CONTENT AREA:** Mathematics

TOPIC: Use of bar graphs for demonstrating participation in sports activities.

PERFORMANCE OBJECTIVES

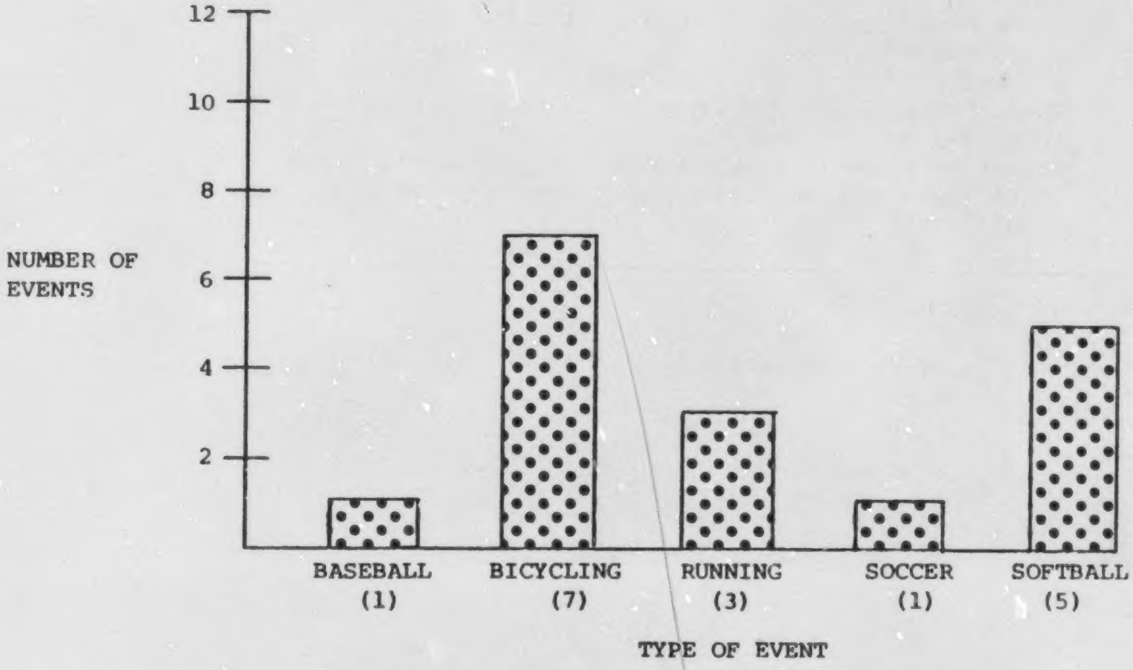
Content Area Objectives Students will be able to:

- read and interpret bar graphs.
- translate the scale units used on a bar graph into numerical quantities.
- construct a bar graph from given data.

MATERIALS

- Data from newspapers/magazines made into bar graphs or for use in the construction of a bar graph.
- *Fundamentals of Mathematics II*, pp. 41-45.

MOTIVATION Display the following bar graph:



GETTING STARTED

If represents 25 items, what does represent? Elicit that the problem is difficult because it is hard to estimate the part of the whole illustrated. A more accurate method of representing data is needed.

QUESTIONS TO BE ASKED PRIOR TO LESSON DEVELOPMENT

1. What are the parts of the graph?

2. What is the scale of the graph?

DEVELOPMENT

1. Discuss the parts of the graph:

   Title - subject of the graph
   Horizontal and Vertical Axis - tells what each row of bars represents and the number of bars
   Scale - length of each bar

2. Answer the following questions from the information given in the motivational strategies.

   . How many softball games were held on Sunday? running events? soccer games?
   . Which amateur sport has the most events Sunday? least events?
   . Are there more events in running or in bicycling? baseball or softball?
   . Would you estimate that more people participate in softball than running? Why? Why not?
   . Discuss the types of information that we cannot determine from the graph (spectator attendance, participant attendance, reasons for sport popularity).

ASSESSMENT QUESTIONS

What are the parts of a bar graph?

SUMMARY ACTIVITY

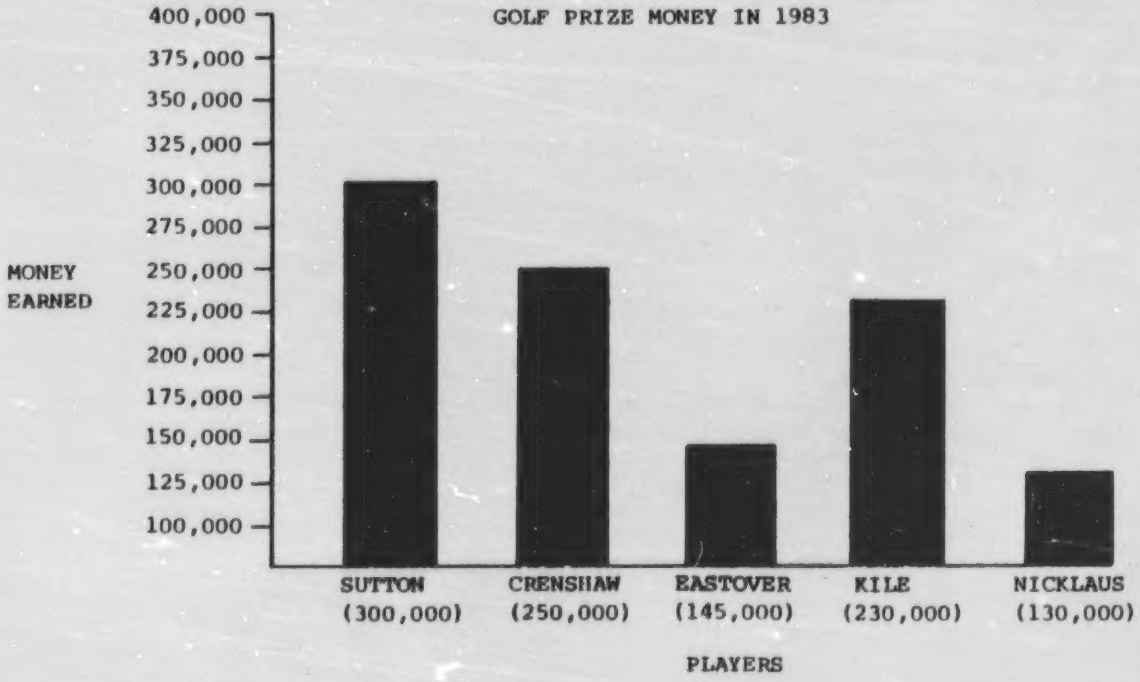
Construct a bar graph from this table of data:

Senior League Team	Number of Games Won
Flushing Tigers	13
Long Island Mets	8
Valley Stream Royals	18
O'Shea Slammers	7
Mount Vernon Hawks	9

APPLICATION ACTIVITY

Answer the following questions based on the information given on the bar graph.

- How much has Eastover earned? Nicklaus?
- Who has won the most money? least money?
- What is the difference between the largest and smallest sum?
- What is the average amount earned of the five players?



Theme: Health/Sports   **Content Area:** Social Studies

TOPIC Are the modern Olympics different from or similar to the Olympics of the ancient Greeks?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- describe how the ancient Olympic games were ogranized and judged.
- compare and contrast the modern Olympic games with those of ancient Greece.
- draw conclusions, based on the Olympics, about how our culture differs from that of ancient Greece.
- evaluate the significance of the games to the Greeks and to modern societies.

Reading/Writing Objectives Students will be able to:

- determine the main idea of the reading selection.
- discuss detailed information from the reading selection.
- outline the similarities and differences between the ancient Greek and modern Olympic games.
- make inferences, based on the reading selection, about the culture of ancient Greece as it compares to our own.

MATERIALS

wall map of the world;
duplicated copies of reading selection.

MOTIVATION

Describe the vast preparations now underway for the 1984 Summer Olympics in Los Angeles and ask class, "Why do people from all over the world want to attend the 1984 Summer Olympic games?" After a brief discussion tell students that the first Olympics took place over 2,700 years ago in ancient Greece. Ask students what questions they can raise about these ancient games. The following questions might be elicited and placed on the chalkboard:

- Where did the games take place?
- When did the games take place?
- Why did they take place?
- How were they organized?
- Who participated?
- How do they compare to our present day Olympics?

If a key question such as, "How do they compare to our present day Olympics?", is not elicited from the class, supply this question yourself.

PREPARATION FOR READING

On a wall map after showing students on the wall map the locations of both the 1984 Summer Olympics and the ancient Greek games, tell them they will be reading a description of the ancient games. Tell students to use the questions they previously raised to guide their reading. Before the students begin silent reading, anticipate vocabulary problems. Write the following sentences on the chalkboard. Have students define the underlined words by using contextual clues.

- As we entered the ball park, we were suddenly in the midst of thousands of people.
- In my family, children were forbidden to stay out past ten o'clock on a school night.
- Although the identity cards of reporters were checked very carefully, once in a while an imposter slipped by.
- Many tales tell of the legendary Robin Hood who stole from the rich to give to the poor.
- When you take a picture you have to focus your camera.

SUPERVISED SILENT READING

Questions to be Asked After Reading

1. Ask students to supply a title for the reading selection; this is an excellent way of determining if they have gotten the main idea. Present the class with the three choices below. Explain that one of the titles is so wide that it includes more than is found in the reading selection. Another is so narrow that it does not cover the main idea of the reading. The best title is the one that best fits the ideas contained in the reading selection.

    - Life in Ancient Greece
    - A Day At the Olympics
    - Rules for Olympic Contestants

2. How were the ancient Olympic games organized and judged?

3. What were the special rules for the contestants?

4. Why did the Greeks have Olympic festivals?

5. What do the Olympic games tell us about Greek attitudes toward:
    - men and women
    - winning vs. the way you win (performance)
    - religion
    - individual vs. group accomplishment

6. How do the Olympic games today compare with the ancient Greek games?

SUMMARY ACTIVITY

Have students complete the following chart by answering each question about both the ancient and modern Olympic games. Then ask them,"Are the modern Olympics different from or similar to the ancient games?"

	ANCIENT GAMES	MODERN GAMES
1. Who attends?		
2. Who participates?		
3. What do contestants wear?		
4. How are track events judged?		
5. What is the winner's reward?		
6. Why are the games held?		
7. How are winners honored?		

APPLICATION ACTIVITY

Have students write a paragraph using one of the following topic sentences:

- If I had my choice, I would attend the modern day Olympics because...
- If I had my choice, I would have attended the ancient Greek Olympics because...

Reading Selection (Health/Social Studies)

Imagine that a time machine you have been tinkering with secretly in your room is suddently working. Magically you are carried back through the centuries and set down at Olympia in Greece. It is the end of summer in the year 464 B.C.

You are suddenly in the midst of thousands of people. As you look around you, you see a number of stone buildings with columns. They are set near the middle of a lovely plain between mountains. Over the heads of the crowd and beyond the buildings you can see the tops of hundreds of tents.

While watching the people standing around you, you suddenly realize there are no women. Turning to a Greek standing next to you, you ask about this (your time machine permits you to speak in Greek). He tells you that married women are forbidden to attend the Olympic festival and that single women rarely come.

You ask your Greek friend if there are any other special rules. He replies that only male Greeks who are free citizens may compete in the contests. To make sure of this, each runner is introduced by his name, his father's name, and the name of the city from which he comes. Once in a while imposters slip by, he reports, but it is a point of honor that the games are an all-Greek celebration.

At that moment a roar goes up from the crowd. All eyes focus on the end of the stadium. Here some seats have been set up near what appears to be a finish line. Approaching those seats is a serious group of men, obviously the judges. Following them the competitors enter the stadium and are introduced one by one. After the introductions the warm-up period begins. Each athlete throws off his robe and rubs his whole body with olive oil. You see that the contestants will run in the nude and that each has a lean and fit body.

Finally the judges call the race. The runners start in stone blocks in a line of twenty. The eagerness and excitement of the crowd are catching, and you strain forward to see the race. At a signal the runners leap forward and speed down the length of the stadium. The finish is close, and each judge marks down a score separately. After several minutes of tense delay the result is announced. The runner who finished second is declared the winner. You are amazed. Your friend explains to you that the race is judged not just on speed but on *how* the athletes run.

The crowd cheers wildly as the winner comes forward. He is then crowned by the judges with a wreath of olilve leaves. You look in vain for a gold medal or a silver cup, but the simple wreath is all the winner receives. Your new friend explains that the wreath of victory comes from a sacred wild olive tree. It was supposedly planted by Heracles, the son of Zeus. Heracles was one of the legendary founders of the Olympic games. Thus, by winning the olive wreath, the athletes are honored by the gods. Your neighbor tells you that the winners will be given a triumphal parade in their cities when they return. They will be treated as heroes for the rest of their lives. They will be so honored in part because they won and brought glory to the city. But they will also be honored because their success pleases the gods and brings the favor of the gods to the citizens of their city.

As the afternoon wears on with races of different distances, you notice that there are no relay races. All the contests are between individuals. In response to your questions about this, your Greek friend seems surprised. He points out that all the contests at the Olympics are for individuals.

By the end of the day you are tired and hot but content. You have seen some thrilling competition. You wish you could stay another day to see the boxing, wrestling, and other events. Your time machine has run down and whisks you home.

From John M. Thompson and Kathleen Hedberg, *People and Civilization* (Lexington, Mass.: Ginn and Co., 1977) pp. 142-145.

Business – Related Lessons

THEME: Business **CONTENT AREA:** Communication Arts

TOPIC Locating and "decoding" ads in the "Help Wanted" section of a newspaper.

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- Locate want ad section using index on front page.
- Interpret abbreviations used in want ads.
- Develop strategies to locate a job.
- Develop methods of responding to ads.
- Distinguish between employment agency ads and regular "help wnted" ads.

Reading/Writing Objectives Students will be able to:

- increase their vocabulary skills.
- "decode" abbreviations used in want ads.
- scan the want ads for suitable jobs.

MATERIALS

Want ad section (duplicated)

MOTIVATIONAL STRATEGIES

Ask students to name ways to find jobs other than want ads. They should be able to come up with the following:

1. friends and relatives
2. school placement
3. work-study jobs
4. New York State Employment
5. private agencies
6. walk-in personnel departments
7. civil services
8. training schools
9. temporary employment agencies
10. recommendation of teacher

Ask students, "Who has a job after school?" Have them discuss how they found their jobs.

Elicit from students what methods of job hunting they think will be most difficult for them. Why?

PREPARATION FOR READING

Distribute copies of the want ad section and tell students that they will be exploring different types of jobs available. Bring to their attention the fact that the heading of the first column "Employment Agencies" differs from the heading of the other four columns. Use the ads as a source of vocabulary reinforcement and write the following sentences on the chalkboard. Have students define the underlined words by using contextual clues.

- The sign in the window said "All Work Done On Premises."
- The job of a carpenter requires expertise in measuring.
- You will benefit from resting in bed when you have a cold.
- Would have preferred to go to the movies instead of the beach.
- The enthuasiastic crowd screamed when Jones hit a homerun.

SUPERVISED SILENT READING

Questions To Be Asked During Reading

- Does anyone know what an employment agency is?
- Do you call the newspaper office to inquire about the jobs listed in the want ads?
- Do you need experience to be a waiter or a waitress?
- Can you work part time on all jobs?
- Do you have to work on Saturdays and Sundays on some jobs?

Can males and females apply for all jobs?

Questions To Be Asked After Reading

After the students have had sufficient time to look over the ads and discuss the above questions, have them makeup the following chart and direct them to find the abbreviations on the ads.

Abbreviations	Meaning
BET	between
c/o	in care of
cor	corner
exp	experience
F/T	full time
flex	flexible
gd	good
hrs	hours
I.D.	identification
info	information
lab tech	laboratory technician
lite	light
min	minimum
nec	necessary
oppy	opportunity
P/T	part time
ref	references
sal	salary
steno	stenography
w/	with
w/o	without

Have students make up their own ads.

SUMMARY ACTIVITY

Have students use the want ads as a guide to answer the following questions:

- Where do you apply to get a job as a nurses aide or as a domestic?
- Which ad asks for a resume?
- For which job must you have a driver's license?
- For which job do you have to know arithmetic as well as typing?
- For which job do you have to apply in person?

APPLICATION ACTIVITY

Have students write a letter of application for one of the ads. Instruct them to say why they want the job and why they think they are qualified for it.

or

Have students write about a member of the family who has one of the jobs listed in the ads.

or

Write about the problems they had when looking for a job.

COMMENTS TO THE TEACHER

Duplicate attached want ad section and distribute. Refer to "Getting Your Foot In the Door," New York City Board of Education Division of Curriculum and Instruction. Words used in sentences are underlined in the ad section.

III-21

(100)EMPLOYMENT AGENCIES

RELIABLE HELP,
Nurses Aide Full or P/T
Domestic Full or P/T
SUNSET EMPLOYMENT
AGENCIES
6005-5th Ave. Bklyn
OLGA OLSEN
GE9-6505 GE9-6506

(115)HELP WANTED

Insurance Sales
Interested in high income-- Nationally known insurance co. has openings for qualified representative. Call Mr. Chinitz, 237-1200.

Excellent income for part time home assembly work. For info call 504-641-8003 Ext. 7922

Gas attendant, full time 5 days steady, top pay for right person. Also P/T flex. hrs I.D. & check ref's. 946-9821

STATEN ISLAND
SUPER WANTED
GARDEN APTS
Knowledge of gardening. On premisis apt w/utilities plus salary. Give resume of employment. Write Box 37 c/o This Newspaper 8723 - 3 Ave. Bklyn, N.Y. 11209

LEGAL NOTICE

In compliance with New York State and Federal Laws which prohibit discrimination based on race, creed, color, national origin, sex, blindness, and sponsor. The Palm Tree Nursing Home admits and treats all patients on this non-discriminatory basis.
(Sept. 2, 1983)

Catering Hall needs waiters/waitresses - part time weekends - 748-3980.

CLERK F/T general office work, good at arithmetic. Light typing, billing, answer telephones. Benefits. Park Slope 499-8600

File Clerk, full time, 9:30 to 5:30 PM. Bay Ridge law office. 748-8080 Call bet 9 & 12 noon. Salary $120

(115) HELP WANTED

Dental Assist: Exp. nec. Bay Ridge area. 836-7612. Call Tues, Wed, Thurs 10 Am to 2 PM ONLY

Small growing custom woodworking firm seeks experienced person with diversified office skills, bookkeeping, follow up P O orders. Lite typing. Full or part time. Salary open. Write Box 38 c/o This Newspaper 8723 3 Ave, Bklyn, N.Y. 11209

WAITRESS WANTED. GOOD PAY & GOOD TIPS. 965-2460

BAR PERSON WANTED
All shifts - Apply in Person
Mon - Fri 11 AM - 4 PM. Just Us Lounge, 123 Ave S. (cor. W. 9th St.) Bklyn N.Y.
"Ask For Frankie"

Asst to Ad Manager. Career Oppty. College grad preferred. Must type & be sales minded. Advertising background helpful but not necessary. Flexible hrs. May consider part time to start.
Call 238-6606

Excellent opportunity for experienced window installer. Call 836-5791

Person with jewelry experience. Repairs
767-9713

BARBER
Barber - part time retired. Call 871-2125

Full Time
Experienced Dept Store
Cashiers & Sales Help
373-1200

BOOKKEEPER
All phases manual & computer generator journals. F/T permanent position - growth potential with expanding Boro Park company. Call 633-6524

Primary teacher, experienced person, back ground elementary education. Develop & implement education program. 1st thru 3rd grades. After school study center. Bi-lingual Spanish preferred. Submit resumes to Patricia Phillips, 421-7th St. Bklyn 11215

PART TIME CHRISTIAN EDUCATION DIRECTOR
Needed for SALVATION ARMY 252-86 St. For further information contact: CAPT. ANDERSON at 238-2991.

(115)HELP WANTED

Wanted Part Time Waiters/Waitress & Cooks. Weekends only. Classy Restaurant in Staten Island. Call between 2 & 5 PM. 351-0953

Wanted experienced waiter/waitress part time. Call after 3 PM Tues thru Friday 9202 Ft. Hamilton Pkwy

Beautician wanted. Experienced in teased styling, cut & blow styling. Call Tues to Thurs 10 AM to 4 PM. 788-9714

Executive secretary local Bay Ridge firm, F/T position, steno required, competitive wage. Please reply to Box No. 34, c/o This Newspaper, 8723 3 Ave. Bklyn, N.Y. 11209

SECURITY
NY security firm wishes to hire experienced guards to work large well known Bklyn acct. gd benefits & pay reply by telephone 9 AM to 3 PM. Mon thru Fri. 732-6636

Large wholesale distributors looking for bright individual to train in Computer Dept. Must have good typing skills. Reply Colonial Mirror & Glass 35 Kent Ave. Bklyn

(P/T limousine driver over 35 (semi retired. Call after 8 PM
837-1116

DELI CLERK WANTED. 9316 - 3rd Ave. Bklyn
748-1065

Secretary 92nd St. "Y" senior program AT 15 WEST 86th ST. Oct thru May, good organizational/secretarial skills needed. Contact Ms. Bonnie Mitchell 427-6000

WAITER/WAITRESS wanted to work in food concession in bingo hall. Can earn $5 plus hour. 416-5 Ave., bet. 7 and 8th Sts., on 5th Ave. Inquire Sundays only bet. 1-2 p.m.

Greek-American school teacher K-8, English subject. Math & sciences teacher special consideration. MA4-0801 or 748-5706.

ATTENTION
EARN BIG BUCKS IN TV COMM. FILMS & MODELING. TOTS TEENAGERS & ADULTS CALL FOR DETAILS. 236-7491

Primary teacher, experienced person, back ground elemen-

(115)HELP WANTED

Lab tech medical lab. Boro Park. F/T min 3 yrs experience, all areas. Tues thru Sat. 8:30 to 5 PM. 435-7200

EVERY DAY IS PAY DAY
EARN $30 DAILY
EARN MONEY INSTANTLY
INTERVIEWS LIMITED
CALL 273-8534 OR 979-5619

Part time cook with line experience. Days 852-2828

Clerk: Diversified duties, some experience to assist in purchasing, aggressive self starter - good handwriting - good telephone manner - steady job - advancement. Call Ms. Schiff 788-2600

Typist & General office work. Bright enthusiastic individual needed to work in busy sales office. Experienced on Mag card typewriter necessary. Hrs 9 to 5 PM. Free parking. Call Terry. 852-1500

SECURITY GUARD wanted to work in bingo p/t. Located 416-5 Ave., bet. 7 and 8 Sts., on 5 Ave. Inquire Sundays only bet. 1-2 p.m.

DRIVERS WANTED, ALL SHIFTS
BUSY CAR SERVICE
232-2435

Wanted waiter, waitress, bus person. Apply in person, 9:30 AM to 11AM at 8408 - 3 Ave, Bklyn

SECRETARY - West Side Real Estate Management Office, fast typing, some dictation, answer phones. Call 580-2103

B'Hurst Real Estate office seeking RENTAL AGENT with stamina & drive. Great opportunity.
Blanco **232-0300**

Drivers wanted, radio dispatched. Must be over 25 yrs. Your car or ours. Also P/T 7 to 1 AM or PM. KINGSBORO CAR 680-8515

National art company looking for sharp, well put together designer/sales people. Know others like yourself? Get together & we'll come to speak to you about excellent job opportunities. F/T, P/T. No experience necessary. 875-8114

GOVERNMENT JOBS. $16,559 - $50,553/year. Now Hiring. Your Area. Call 805-687-6000 Ext. R-3236

Catering Hall needs

(115) HELP WANTED

Secretaries
With & Without Steno
* * * *
This Is AIG
* * * *
We're one of the fastest growing, most successful insurance organizations of the world.
* * * *
We motivate, train, and place people where they can demonstrate their expertise.
* * * *
Our outstanding growth record creates new jobs and new opportunities for career advancement.
* * * *
Now that you've learned a little about us, we would like to know more about you.
* * * *
If you're a secretary with good skills, excellent communication capabilities, and a business approach to your work, speak with us this week. (Some positions require knowledge of dictation equipment).
* * *
Good starting salaries, excellent benefits.
* * * *
Call Michelle Drelich
(212) 770-6813
American
International Grp.
Personnel Dept., 4th flr.
72 Wall St., NYC 10270
Equal Oppty Employer
* * *

Dental Assistant
P/T experience preferred. Evenings. Sheepshead Bay private office. 336-8309 for interview.

I need 6 people to learn my business. Please call from 12 noon to 6 PM. Mon - Fri 372-5860

Telephone operator, medical service, good telephone voice & handwriting, must be available to work flexible hrs & wekends. 748-1200

(115) HELP WANTED

B'Hurst Real Estate office seeking RENTAL AGENT with stamina & drive. Great opportunity.
Blanco **232-0300**

Experienced F/T medical assistant. Knowledge of Veni-Puncture, EKG
680-6000

Are you in need of a 2nd income? Work from your home, call 232-7740, 9-5 p.m.

EXPERIENCED TELEPHONE PROS
THERMAL-GARD, nationally known Brooklyn firm, has immediate openings for several energetic people who can set up appointments for our dynamic sales force. Good telephone voice & personality necessary and we will provide training. Hours 12 - 8 PM. Guaranteed salary, commissior & bonuses. Call J. Robbins for appointment. 680-7705

Records secretary f/t. Computer word processor and electric typewriter. Own correspondence. Diversified duties. Send resume of qualifications to Box No. 33, this newspaper, 8723-3 Ave., B'klyn 11209.

Driver wanted with own cars. We supply 2 way radios, low low commission. Come in for details. 7513 - 3rd Ave. B'Ridge

Wanted for West Side independent **school COACHES**, 3 afternoons a week, after school, for soccer, volleyball, basketball. Please call 877-1700 ask for Pat Havas

Are you tired or bored with your old job? We have exciting new openings for full & part timers. Must be reliable, honest, & willing to put in good working hrs. Call 748-4484

OPPORTUNITY
Every one of us has a dream. To make money without any investment on our part except hard work. If you are such a person, call for a personnel appt. 998-1303. Car helpful

THEME: Business CONTENT AREA: Communication Arts

TOPIC How can a person achieve success in the business world in spite of a difficult childhood?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- describe cause and effect relationships.
- use contextual clues to define unfamiliar words.
- recognize the characteristics of a biography.

MATERIALS

Duplicated copies of "Woman In A Man's World," in Turning Point: A Collection of Short Biographies, by Kenneth Kieszak, (Globe Book Company).

MOTIVATION

Relate the following puzzle to the class:

Timmy Brown and his father were seriously injured in a car accident late one November night. Timmy was rushed to the operating room of the nearest hospital for emergency surgery. Just before the operation was to begin, the doctor took a close look at the patient and exclaimed, "I can't perform this operation. This patient is my son!"

Ask students to explain. After arriving at solution ask:
Why do few people conclude that the doctor is Timmy's mother? (Have class discuss sterotyping and women's occupations.)

PREPARATION FOR READING

Vocabulary: to be defined through contextual sentences.

1. bulging
2. longshoremen
3. tipsy
4. boarders

SUPERVISED SILENT READING

Questions to be Asked During Reading

1. As you read, try to figure out what made Helen angry.
2. What did she do when the men teased her?
3. What jobs did Helen have while she was in college?

Questions to be Asked After Reading

1. What problems did Helen face when she was a child?
2. What personality traits helped her to become successful?
3. How would you imagine Helen's career aspriations were influenced by her father's death?
4. Why is her career a very satisfying one?

SUMMARY ACTIVITY

1. Write a description of your "dream job" and the skills you think you will need to obtain it.
2. Interview the most successful person you know. Ask:
    a. What problems did he or she face in achieving success?
    b. What character traits helped him or her achieve success? How?

COMMENTS TO THE TEACHER

Have a class library of magazines that depict people in a variety of job situations for use in the application activity.

Helen was angry.
She walked up to the dockworker.
She pulled her arm back.
She punched him right on the jaw.
What made Helen so angry?

woman in a man's world

Smoke filled the large room. The noise got louder. There were hearty (*HAR-tee*) shouts and much laughter. The waiters were kept busy. They ran back and forth from the kitchen. Each time, they brought a pitcher of beer.

The men were having a good time. Today was their day to relax. This was one day the ships could wait.

These men were a hardy bunch. They were used to the outdoors. They worked hard. Their bulging muscles (*MUS-ulz*) were proof of that. Their talk was rough (*RUF*) and to the point. There were no weaklings here. These were longshoremen (*LONG-shor-men*).

Here, the strong man was master. It was a place where actions, and not words, counted. It was a man's world except for one woman. Her name was Helen D. Bentley.

Mrs. Bentley walked into the room. Some men continued talking. Others stood and cheered. "Hi, Helen!" one man shouted. "Know any good jokes?"

Helen laughed and went on. Another man walked up to Helen. He was a little tipsy. "Hey, Helen," he yelled, "is your hair dyed? What happened to your nose? Is it still used as a ski slope?"

Helen was angry. She put her 130 pounds to use. She pulled her arm back. It moved fast. It landed on the dockworker's jaw.

Many of the men around her applauded. "That's showing him," they said. "I guess he won't bother you again."

Helen walked up to the stage. She began to speak. The men quieted down. They listened. Helen talked of things they knew. She talked about the sea.

Helen's career (*ka-REER*) centered around the sea. Yet, her early life was very different.

Helen was born in the mountains of Nevada. She grew up in a copper-mining town. There was no water nearby. The ocean was hundreds of miles away.

Helen's childhood was an unhappy one. Her two sisters and four brothers shared her sorrow. Their father was very sick. He was dying.

Mr. Delich (*DEE-lik*) worked in a copper mine. Each day he went deep into the earth. For years he breathed the air in the tunnels. This air was killing him. It was filled with small pieces of dust. This dust filled his lungs. It made it hard for him to breathe.

The family tried to help. But it was no use. Mr. Delich was slowly dying. After a while, he got worse. The pains in his chest grew stronger. He began to cough more and more. He found it harder to breathe.

Mr. Delich grew very sick. He could work no more. He had to stay in bed. There was nothing anyone could do. There was no cure. Finally, when Helen was eight years old, he died.

Mrs. Delich was alone. She had seven children to raise. She had a family to keep together.

Many years before, the Delichs had come from Yugoslavia (*YOU-gow-SLAV-ee-uh*). They came because of their children. They wanted them to get a good education.

Mrs. Delich worked hard. She took in boarders. She did odd jobs. Helen also helped. When she was twelve years old she got a job. She worked in a dress shop. Their hard work paid off. None of the children had to leave school.

Helen did not disappoint her mother. She did well in school. Her marks were high. She was president of her senior class. She was business manager of the yearbook. Helen enjoyed the social life of the school. The young girl took part in every club, dance, and event the school had to offer.

Helen's graduation day was an important event. Her mother was very proud of her. She received many awards and scholarships. She broke a record. No other student at White Pine High School had ever received more awards.

The scholarships were more than just awards. They were very important to Helen. They meant she could go to college.

Helen went to the Universities of Nevada and Missouri. She studied journalism (*JUR-nil-izm*). Once again, she did not disappoint her mother.

Helen studied hard. She also had many jobs. Being a waitress and a drug-store clerk were some of them. Her work did not hurt her grades. She graduated college in three years.

After college, Helen became a reporter. She worked for the *Baltimore Sun*. She wrote many stories. They told of the problems of the waterfront. They made her famous. Helen, however, was not happy with just writing. She made her own television show. Here, she spoke of the importance of the shipping industry. "Our country," she said, "is in real trouble. Our merchant fleet is very old. In two or three years it will be too late. We will become a minor sea power. We will be in the hands of foreign powers."

Not long after, Helen was called to Washington. The President asked for her help. He gave her a big job. She was made the head of the Federal Maritime Commission.

Helen's job was not an easy one. She had to handle many problems. Anything that had to do with the sea came under her control. She was always busy. The large ship lines had to be watched. Sometimes they tried to fix prices. If not checked, the smaller lines would be driven out of business. There was also a great deal of paper work.

Helen had to make sure the ship companies carried insurance. In case of fire or damage, she made sure they were covered. Helen also handled oil spills. She found the company that caused the damage. Then, they were forced to clean the mess up. One of her most important jobs was the handling of labor problems. She helped end many strikes.

Helen did her job well. She won the respect of many people. On May 5, 1970, she was reappointed (*REE-uh-poyn-ted*) for a five-year term.

Today, as before, the shipping industry is still a man's world. The docks are still run by men. It's a private world, except for one woman. The exception (*ex-SEP-shun*) is Helen Delich Bentley. She is a woman in a man's world.

ACTIVITIES

DID YOU GET THE MAIN IDEA?

Helen was the exception in a man's world because:

- **a)** her father died.
- **b)** she headed the Federal Maritime Commission.
- **c)** she came from Nevada.
- **d)** she was a reporter.

WHAT IS THE CORRECT ORDER?

1. Helen works as a drug store clerk.
2. Mr. Delich dies.
3. Helen becomes the head of Federal Maritime Commission.
4. Helen graduates from White Pine High School.
5. Helen works in a dress shop.
6. Helen works for the *Baltimore Sun*.

IS IT RIGHT OR WRONG?

1. Helen's parents came from Yugoslavia.
2. Helen had a happy childhood.
3. Helen hit the dockworker in the stomach.
4. Helen had a busy social life in high school.
5. Mr. Delich worked in a coal mine.

DO YOU REMEMBER?

1. The longshoremen were:
   - **a)** strong.
   - **b)** weak.
   - **c)** sad.
2. The longshoremen worked on:
   - **a)** cars.
   - **b)** ships.
   - **c)** planes.
3. Helen was born near:
   - **a)** the ocean.
   - **b)** the mountains.
   - **c)** the sea.
4. How many brothers did Helen have?
   - **a)** two.
   - **b)** four.
   - **c)** seven.
5. Mr. Delich became sick:
   - **a)** from breathing dust in a mine.
   - **b)** from smoking too many cigarettes.
   - **c)** after falling off a ship.
6. Mr. Delich died when Helen:
   - **a)** was born.
   - **b)** was eight years old.
   - **c)** graduated from college.
7. The Delichs came to the United States so their children would have a better:
   - **a)** home.
   - **b)** job.
   - **c)** education.
8. In college, Helen studied to be a:
   - **a)** reporter.
   - **b)** drug-store clerk.
   - **c)** waitress.
9. Helen graduated from college in:
   - **a)** three years.
   - **b)** four years.
   - **c)** five years.
10. Helen made her own:
    - **a)** copper mine.
    - **b)** newspaper.
    - **c)** television show.

DO YOU KNOW THE MEANING?

1. "There were hearty shouts and much laughter." Hearty means:
   - a) nasty.
   - b) old.
   - c) friendly.
2. "Each time they brought a pitcher of beer." A pitcher is a:
   - a) glass.
   - b) large container.
   - c) painting.
3. "These men were a hardy bunch." Hardy means:
   - a) strong.
   - b) friendly.
   - c) loud.
4. "Their bulging muscles were proof of that." Bulge means to:
   - a) be tired.
   - b) be strong.
   - c) stick out.
5. "There were no weaklings here." A weakling is a person who is not:
   - a) strong.
   - b) old.
   - c) rich.
6. "For years he breathed the air in the tunnels." A tunnel is:
   - a) a cave.
   - b) an underground passage.
   - c) a road.
7. "She took in boarders." A boarder is someone who:
   - a) lives in another person's house.
   - b) lives in a hotel.
   - c) has no money.
8. "Our merchant fleet is very old." A fleet is:
   - a) a ship.
   - b) a large group.
   - c) a sailor.
9. "The exception is Helen Delich Bentley." An exception is something that is:
   - a) different.
   - b) the same.
   - c) old.

WHAT DO YOU THINK?

1. Why were the waiters so busy?
2. Why were there no weaklings among the longshoremen?
3. Why did actions count more than words?
4. Why did the men applaud Helen's punch to the jaw?
5. Why did Mr. Delich continue to work in the mine?
6. Why was there no cure for Mr. Delich?
7. Why did Helen join everything in school?
8. Why did Helen work while in college?
9. Why did Helen graduate college in three years?
10. Why wasn't Helen happy with just writing?
11. Why was Helen reappointed in 1970?

HAVE YOU EVER WONDERED?

1. How is copper ore mined?
2. What is *slurry?*
3. What are *anodes* and *cathodes?*
4. What are the properties of copper?
5. How does a ship stay afloat?
6. What is the world's largest ocean liner?
7. What is a *Merchant Marine Document?*
8. What are some of the international sea treaties?
9. What makes the *Savannah* different from other merchant ships?

WHAT IS YOUR OPINION?

1. What problems does a woman in a man's world have? Why do you think most men respect Helen?
2. What do you think would be interesting about a career in journalism? What do you think would be difficult about such a career?

THEME: Business CONTENT AREA: Mathematics

TOPIC Computing sales tax

Aim: How does a waiter or waitress determine the sales tax on a customers bill?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- compute sales tax for a restaurant check.
- recall tax chart amounts from .01 to $1.00
- add decimals
- determine tip from check total

Reading/Writing Objectives Students will be able to:

- differentiate between jobs which pay fixed salaries and jobs which depend on tips.

MATERIALS

Sales tax chart for New York City.

MOTIVATIONAL STRATEGIES

What is sales tax? How does it differ from state to state? Elicit N.Y. City Sales tax (% state, % local). Why is it necessary for the government to collect sales tax?

GETTING STARTED

If we pay 8 1/4¢ for every dollar, how much would we pay for $2.00? $3.00? $4.00? If you paid 0.41 tax, how much was your bill?

Questions To Be Asked During Reading

You just landed a job as a waiter/waitress in a restaurant. You told the boss you were experienced. He did not give you a tax chart. How do you figure out the sales tax for each customer's bill?

DEVELOPMENT

Review: Change 8¢ into decimal form.
Change 8% into decimal form.
Change 8 1/4% into decimal form.

Multiply decimals. (Point out that it is easier to put the number ending in zero on the bottom).

```
.0825
    4
.3300  Tax on $4.00 is .33 (33 cents)
```

Questions To Be Asked After Reading

Compare tax on a $4.00 sweater and on a $400.00 refrigerator. Teacher asks for volunteer to explain to a new employee how to compute sales tax without a chart.

SUMMARY ACTIVITY

If the customer's bill is less than twelve dollars and you are rushed, how could you compute the sales tax in your head? (8 X 12 = 96 cents, probably 1.00 with the other 1/4%.)

APPLICATION ACTIVITY

Write entries and prices on blackboard. Pose a situation asking for student volunteers, two will be serving, two will be customers. Decide prior to calculations who will compute sales tax on paper and who will calculate it in their head. Have customers give the exact same order to their waiter/waitress, specifying that they are in a hurry. Have class decide which server was accurate in his or her calculations.

As a customer you should be ready to add on 15 to 16% tip. A good rough approximation of tax and tip combined is about 1/4 if you total food bill (8% + 16% = 24% approximately 25% = 1/4.) So if your tab is 6.00, you total bill, including tax and tip will be $7.50.

COMMENTS TO THE TEACHER

Tips are a way of life for many workers in New York City but not so in other parts of the country or world. Discuss the idea of tips (To Insure Prompt Service.) Should we do away with tipping and give people better salaries?

THEME: Business

CONTENT AREA: Mathematics

TOPIC Business: Retail Sales.

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- compute the selling price where the discount is a unit fraction.
- compute the amount of discount if the rate of discount is a unit fraction.
- multiply a fraction by a whole number.

MATERIALS

Newspaper ads showing fractional discounts.

REFERENCE

Fundamentals of Mathematics II page 95-100

MOTIVATIONAL STRATEGIES

The Far Out Fashions Emporium is having an end of season sale. You have been hired to help out in the rush. Reductions are as high as 1/2 and as little as 1/10. Your job is to mark down the price tags. The boss assumes you know how. Do you?

WORKSHEET Business/Mathematics

Computing the Sale Price

You are hired as the assistant to the manager at the Far Out Fashion Emporium during its semi-annual sale week. You must compute the sale price of the following items:

Item	Selling Price	Discount	Sale Price
Sweatshirt	$15.00	1/3	________
Pants	$25.00	1/5	________
Blouses	$20.00	1/2	________
Shorts	$10.00	1/10	

GETTING STARTED

Review multiplying a whole number by a fraction using these examples:

1. 1/4 X 36
2. 1/5 X 195
3. 1/3 X 63
4. 1/2 X 25

Questions To Be Asked During Reading

What do we mean by discount, selling prices, sale price? How can we determine the sale price of an item if we know the original price and the rate of discount?

Computing the Sale Price

1. Solve the Motivational Strategy chart by eliciting this procedure:
    a. Multiply the rate of discount by the selling price, giving the amount of discount, e.g., $15 X 1/3 = $5
    b. Subtract the amount of discount from the selling price, e.g., $15 - $5 = $10
2. Discuss the other terms meaning selling price (original price, ticket price, regular price, list price), sale price (discounted price, net price) and discount (rate of discount, markdown.)
3. Refer to newspaper ads: Is this ad correct?

    Video Cassettes - Regularly $52.84
    Now 1/4 off - only $13.21

    Ask the students to compute the amount of discount and sale price.

Questions To Be Asked After Reading

1. What does original price mean?
2. How can we protect ourselves as consumers with regard to store ads?

SUMMARY ACTIVITY

How can we determine our best buy from these offers?

Odd-Junk Trading	Audio Arena
Regular Price: $27	Original Price: $24
Super Sale: 1/3 off	This Week Only: 1/4 off

APPLICATION ACTIVITY

Solve:

1. Mr. Marvel purchases a pair of sunglasses regularly selling for $12.99 during a 1/3 off sale. What is the markdown? Sale price?

2. Frank purchased a used car from Diamond Jerry's Car Lot for only $600. How much of a discount did he receive? What fractions of the original price is the discount?

3. During a sale, Maria saw a blouse whose ticket price was $15.00. What fractional role of discount must the store be giving if Maria purchases the blouse for $10.00.

THEME: Business CONTENT AREA: Social Studies

TOPIC Did the factory system improve the way goods were made?

PERFORMANCE OBJECTIVES

Content Area Objectives

Students will be able to:

. describe how the factory system changed the way goods were made.
. compare and contrast the advantages and disadvantages of the factory system and the domestic system.

Reading/Writing Objectives

. determine the main idea of the reading selection.
. discuss detailed information from the reading selection.
. compare and contrast the advantages and disadvantages of the factory system and the domestic system.
. draw inferences about the ways in which the factory system changed people's lives.
. read and interpret a picture.

MATERIALS

duplicate worksheets 1 and 2

MOTIVATIONAL STRATEGIES

Show students two similar items (e.g., shoes, briefcases, dress, shirt, etc.); however, one is handmade and one is factory made. Ask them which they would prefer if both looked simlar and cost about the same. Or if "hands-on" items are not available, just ask students whether they prefer handmade clothing or clothing made in a factory. Have them explain their answers.

Tell the class that before the 18th century all goods were made by people in their homes. Then in the 18th century goods started to be made in factories. Ask students why they think this change came about.

PREPARATION FOR READING

Show students picture A of a person making goods at home and picture B of people making goods in a factory. Ask the class to describe what is happening in each picture. Then reproduce on the chalkboard the following chart which compares the factory to the domestic system. Have the class check (X) the system (factory or domestic) that best answers each question and then explain their choices.

	DOMESTIC SYSTEM	FACTORY SYSTEM
1. Which system required the largest number of workers to make the same number of goods?		
2. Which system produced more goods?		
3. Which system produced the best quality goods?		
4. Under which system would prices be higher?		

After students have discussed their answers, tell them that they are going to read an interview with a factory owner so that they can learn more about early factories. Before the class reads the interview, make sure that they understand the meaning of the word "textiles" by having them define it from the way it is used in the following sentence. They may also be asked to make up their own sentences which show that they know the meaning of the underlined word.

Today man-made fabrics are replacing the natural textiles of wool and cotton.

Questions to be Asked Before the Reading

As you read the interview, consider the following questions:

- What was the role of the factor when goods were made at home?
- Was a factor necessary in the factory system? Why? Why not?
- What changes took place in the way goods were made as a result of the factory system?

Questions to be Asked After the Reading

- Tell students that they are the reporter conducting this interview and that they have thought of three possible titles for their interview. Select the title that best sums up this interview.

Factory to Bring Great Changes to Manchester
Industrial Revolution Has Great Impact on All People
River Provides Water Power for Factory

- What changes in the way goods were made were brought about by the factory system?
- What advantages do you see in producing goods this way? What were the disadvantages?
- How do you think the manufacture of goods in the factory system might have affected the life of the customer?
- How did the life of the worker change as a result of working in the factory?

- Mr. Hardy stated that his workers were well paid. Is he a reliable source to discuss pay and working conditions of workers? How would you go about finding out what conditions for workers were really like? This could be the introduction for a subsequent lesson on working conditions in a factory.

SUMMARY ACTIVITY

Ask students to write a composition with the heading, "The Factory System - Blessing or Curse for People."

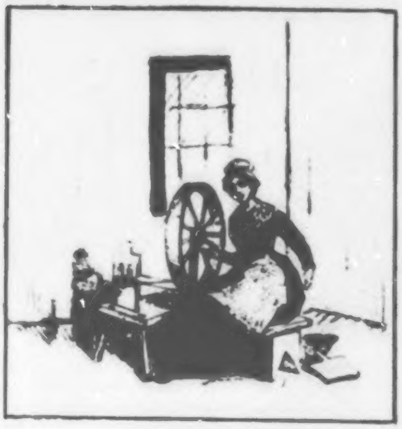
APPLICATION ACTIVITY

Direct students to look at the chart they completed at the beginning of the class that dealt with a comparison of the factory and domestic systems. Ask them to complete this chart comparing the factory system in the 19th century and the factory system today. The students should explain their answers. Then ask them if there are any other ways factories are different today than in the 19th century. Another question that may be asked is how they think factories will different 50 years in the future.

Worksheet D-1

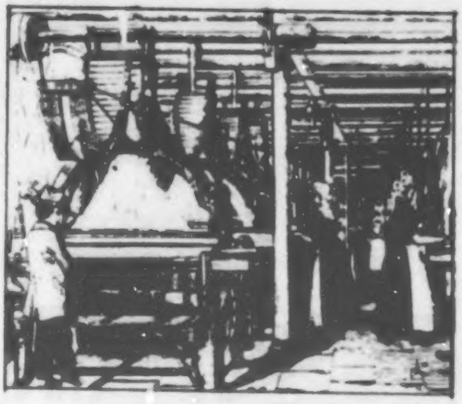
Domestic System versus Factory System

Domestic System



Reprinted with permission of the University of Reading, Institute of Agricultural History and Museum of English Rural Life.

Factory System



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Study the pictures on this page and describe the domestic system and the factory system in the spaces below.

Domestic System	Factory System

WORKSHEET 2

TIME: 1790 PLACE: Manchester, England

EVENT: An interview between a reporter for the Manchester Times and the owner of a new factory.

REPORTER: Everyone in town is talking about the building you're putting up, Mr. Hardy. What are you planning to use it for?

HARDY: I intend to manufacture cotton cloth. The building will be my factory.

REPORTER: Factory? That's a strange word.

HARDY: It comes from the word factor. I used to be a factor. Do you know what a factor does, young man?

REPORTER: Yes, sir. A factor is a traveling agent who brings raw cotton to workers in their cottages, collects the cloth they make, and then sells it.

HARDY: Quite right. Well, in the factory, things are arranged differently. The raw materials and machines are kept in the factory, while the workers do their work there instead of at home.

REPORTER: Let's go on to something else. Why are you building your factory on the bank of our favorite river?

HARDY: That's the reason I'm building it there, because of the river. The water frames and other machines that will be used to spin and weave cloth are very large. You can't run them by hand. You have to use water power. The river provides the water power. And I don't have to pay it a salary to work for me either!

REPORTER: Speaking about salaries, sir, are you planning to pay your workers high wages?

HARDY: High enough. Every worker will receive a good, steady wage every week. He'll be able to buy proper food and clothing, and teach his children to hope and plan for a better life. The only thing that will keep a worker from living better is his own stupidity or laziness.

REPORTER: To go back to something we were talking about earlier, sir. Do you really think there's a risk that your factory won't succeed?

HARDY: Actually, no, young man. Look at it this way. My machines will turn out a tremendous amount of cloth, about fifty times what the same number of workers used to produce when they were working at home. Everybody wants more cotton. Every ship captain and merchant I talked to in London said that he could sell whatever I produced. If not in England, then in Europe or India. No. I'm not worried at all. England will only become richer than ever by making textiles that people everywhere can afford.

From Bertram L. Linder, et al., A World History (Chicago, Ill.: Science Research Associates, 1979), pp. 443-444.

Food-Related Lessons

THEME: Food CONTENT AREA: Communication Arts

TOPIC: Feeding the Hungry

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- list reasons why the number of hungry people in NYC is growing.
- describe services available to help the hungry.
- propose ways individuals could help with this problem.

Reading/Writing Objectives Students will be able to:

- locate significant details.
- expand vocabulary through contextual clues and use a dictionary.
- write and organize ideas using cause and effect.

MATERIALS

- duplicated copies of newspaper article "Feeding the Hungry in N.Y.C."
- dictionaries
- teacher-made vocabulary worksheet

MOTIVATION

Statistical and government reports state that the number of hungry and homeless people in America is increasing. From what you read and hear in the news and from what you see around you in the city, what evidence can you offer which supports these claims? How does it make you feel?

TRANSITION

Today we will read an article which describes some ways these people are being helped.

PREPARATION FOR READING

Vocabulary development: Prepare a worksheet listing new vocabulary (score, discharge, overwhelming, outreach, perishable, pulsate, incubate, sustenance, cater, frail), and, for each word in a sentence which clarifies its meaning through context. Students also will use dictionaries to determine meaning and enter definitions on worksheets (or in WORD BANKS).

SUPERVISED SILENT READING

Questions to be Asked During Reading

1. What are some of the reasons why there has been an increase in the number of hungry and homeless people in NYC?
2. What kinds of projects have been started in order to solve the problem of hunger in New York?

Questions to be Asked After Reading

1. Who is responsible for organizing these helping services?
2. Where are they located?
3. How could a hungry person find out what services are available in his/her neighborhood?
4. How can an individual contribute to this effort?

SUMMARY ACTIVITY

Panel Discussion(s). Students in small groups prepare and present ideas regarding how the hungry can be helped by:

- the government (on all levels)
- private organizations (religious and community institutions)
- individuals -- especially young people

APPLICATION ACTIVITY

Write a paragraph of 6 to 8 sentences explaining why you believe one person can help in the fight against hunger. Be sure to describe the effect of one individual's contribution on the problem as a whole.

Feeding The Hungry In N.Y.C.

By Karima Temple

IN HOLY TEXTS, HELPING THE poor and needy is spoken of as the work closest to the spiritual nature of humankind—to the whole of humanity—at all times. In approaching the issue of the hunger crisis in New York City, the facts are overwhelming, for how can we deal with knowing that scores of thousands of men, women, and children are starving—not in Cambodia—but in our very neighborhoods. Many are people caught in circumstances beyond their control, including working men and women and their families unable to make ends meet and those who have lost their jobs and people discharged from institutions. Despite inflation and rising unemployment, many social services are being severely cut.

This March, Riverside Church alone served 2,000 people at their food pantry. Such statistics have a paralyzing effect; how does one compute information that so grates against the cultural grain? About 20 percent of all food produced in the U.S. is lost or wasted each year.

If there is any solution to this crisis, it is appealing to the humaneness of humanity. Within each neighborhood of the city, there are hard-working individuals whose deepest commitment is the meeting of human needs. It is through these people we can become involved, for they are the heart within each locality.

Originating in the Depression as church rescue services, there now exist approximately 120 soup kitchens (here called community kitchens) and pantries in the five boroughs of New York, predominantly in Manhattan, the Bronx, and Brooklyn. Their outreach varies widely and many do not wish to be publicized for fear of being overwhelmed by numbers they cannot serve. Most are heard about through churches or helping agencies that people go to when in a crisis, or are referred by the Food and Hunger Hotline. As Community Nutrition funds were cut last year, these organizations are now privately funded. At the following organizations, however, your assistance can truly have an impact.

Just as colors mean nothing to the blind... as musical harmony means nothing to the deaf, only by experience can you know what it is like to feed the poor

Sheikh Muzaffer Effendi

Another breakthrough on the issue of hunger is the proposed opening on July 1st of the first New York City Food Bank, in the Petco Building of the Hunts Point Food Co-op. Here, food wholesalers, retail chains, distributors, etc, will warehouse surplus nonperishable foods which will be made available to local organizations catering to the needy. The Food Bank can best be utilized by making sure that as many agencies as possible gain access to it. For further information, contact the Community Food Resource Center at (212) 549-8155.

In Harlem, there are two strongly pulsating hearts in defense of human need—Emmaus House and Resurrection House. Emmaus-Harlem is one of a multitude of self-sufficient communities throughout the world whose goal is "...to serve first those who suffer most...and to help through (their) actions every man and every nation to fulfill itself through communication and sharing, with equal dignity." Emmaus, 160 West 120th St., has purchased a hotel on Lexington and 124th St. which has 55 rooms and six store fronts. There they plan to run a daily soup kitchen and open a second-hand store. To achieve these goals, Emmaus is in great need of help. Work groups are being organized every Saturday to help rehabilitate the hotel, and help is needed with their lunch and dinner programs at the 120th Street location. For details, please call David Kirk or Francis Locke at (212) 662-7507.

Here we can only touch on the issue of feeding at all levels, but it is the warm welcome and acceptance of so many community kitchens that can incubate the strength, dignity, and many gifts of the often frail guests who come to eat. The ideal is to be able to offer employment or the means for them to feel that, as citizens, they are contributing to the community. Many who come to eat will proceed to serve their brothers and sisters. This is one of the goals of the newly opened kitchen at the Cathedral of St. John the Divine, which serves lunch each Sunday from 2:00 to 4:00 p.m.. The Cathedral Garden supplies the kitchen with fresh vegetables and herbs. Both guests and volunteers are invited to help garden and to join in ceremonies to bless the crops. For further information, call the Food Forum at (212) 226-7502.

At the Thanksgiving Food Forum offered at the Cathedral of St. John the Divine, it was evident from the addresses given by the many politicians present, that we must take responsibility to find out what provisions are being made. If we find injustices, we must feel empowered—if not for ourselves, then for others—to write to our representatives. We can all do much to heal the many injustices of the poor and needy and this is one way; but there are many—as many as there are human beings. Meanwhile, we must awaken our sleeping hearts to see that those who are without have their rightful daily share. To offer sustenance is the least we can do when we are sustained with more than enough for everyone.

***KARIMA TEMPLE** is the coordinator of the Food Forum and former associate editor of* Free Spirit.

To find out about emergency programs in New York City and specific ways to help, the handbook "Hunger Action" is available from the Food Forum, 275 Church Street, NY 10013 (please send $1.50 for postage and handling), or call the Food and Hunger Hotline at (212) 406-2300.

THEME: FOODS CONTENT AREA: MATHEMATICS

TOPIC Calculating cost given price per pounds. Preparing for and catering a party.

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- multiply fractions and whole numbers;
- determine the cost of a quantity of food or beverage given price per pound or per liter.

Reading/Writing Objectives Students will be able to:

- estimate the amount of food needed to serve a designated amount of persons.
- acquaint themselves with prices of various food items.
- compare metric units of food and liquid measure with English units.

MATERIALS

Copy of supermarket advertisement listing meat, vegetable and beverage prices. Duplicate copies of catering worksheet.

REFERENCE

Fundamental of Mathematics, page 73 and 75.

MOTIVATIONAL STRATEGIES

Teacher asks: How many of you have been to a catered affair? Survey class for kinds of affairs - family weddings, confirmations, barmitzvahs, birhtdays, anniversaries. What kinds of foods turn up most frequently? How do you suppose the caterer figures the cost per person so that she can make a profit? Would you save by doing your own party planning.

Display a can of soda marked 12 fl. oz. or 354 ml. Compare to 2 liters. (354 ml = .354 l)

$$\frac{\text{can } (.354)}{\text{bottle } (2{,}000)} = \text{approximately } 1/6$$

Therefore, six cans of soda equal one 2 liter bottle. Compare six cans at \$0.55 with a 2 liter bottle at \$1.89. Which is cheaper?

Questions To Be Asked During Reading

If we are serving coldcuts, salad, and chips, how should we plan ahead for the amounts of each item we need to purchase? Elicit information we need to know: item, price/lb., and quantity. Distribute chart indicating each item, the price of each item needed for the party. Elicit from students other items (pretzels, napkins, plastic cutlery, green sald). Demonstrate multiplication process, using 20 people as the constant 1/8 X 4 X 20 = $10
1/4 X .88 X 20 = 4.40

Questions To Be Asked After Reading

As you work out each item, compare your answer with a partner.

SUMMARY ACTIVITY

Sum up the prices for the total cost of the party.

APPLICATION ACTIVITY

Compare the total cost of this party with the caterer's price of $8.00 per person. If you were a caterer, how much would you charge per person, including your own labor?

Mathematics/Food Worksheet

CATERING A PARTY FOR 20 PEOPLE

How much will it cost?

Item	Per Person	Cost	Total Cost
boiled ham	1/8 lb	$4.00 per pound	
potato salad	1/4 lb	.89 per pound	
pickles	1/16 lb	3.00 per pound	
bologna	1/8	2.50	
rolls	one	.25	
soda	one 16 once can	.55	
coffee	1/25 lb	4.00 per pound	
cookies	1/8 lb	4.00 per pound	
paper plates	one	.06	
paper cups (cold)	one	.05	
paper cups (hot)	one	.08	

Total cost of party ______________

THEME: Food **CONTENT AREA:** Mathematics

TOPIC

Food: Supermarket Buying

PERFORMANCE OBJECTIVES

Content Area Objectives: Students will be able to:

- use unit pricing in a supermarket.
- state the relationship among customary liquid measures.
- react and compare samples of supermarket unit price to determine the best buy.
- compute with decimals.

MATERIALS

Samples of supermarket unit price markers.

REFERENCE

Fundamentals of Mathematics I pp 135-138

MOTIVATIONAL STRATEGIES

Present the following problem. Several different liquid detergents are being sold at the CITY OF FOOD market. Fluffex is sold by the pint for 89¢, Clean-D costs $1.65 for a quart and Mighty Bright comes in gallons which sell for $4.38. Which brand is offering the best buy?

GETTING STARTED

Review multiplication with decimals by presenting this problem. Find the amount of change from a $10 bill when purchasing these items.

6 ears of corn at 25¢ each
3 pounds of string beans at 69¢ per pound
2 loaves of bread at 83¢ per loaf

Questions To Be Asked During Reading

1. What is meant by "best" buy?
2. What is the relationship of pint, quart, gallon?

Development

1. Elicit and chart a table of the relationships among pint, quart and gallon.

Units of Liquid Measure

1 pint (pt) = 16 fluid ounces (fl. oz)
1 quart (qt) = 2 pints (pt)
1 gallon (gal) = 4 quarts (qt)

Ask: How many pints are in 1 gallon? How many quarts in 3 gallons?

2. How can you compare the cost to determine the "best" buy?

	Pint	Quart	Gallon
Fluffex	.89	2 X .89 = 1.78	4 X 1.78 = 7.12
Clean - O		= 1.65	4 X 1.65 = 6.60
Mighty Bright			4.38

Mighty Bright is the best buy.

3. Introduce the terms unit price and actual price and discuss the differences. Emphasize that we no longer need to do this because the unit price is already calculated in the market for us. Display several supermarket unit price markers for the liquid detergent.

Unit Price	You Pay
$7.12 Per Gal.	$.89 1 pt.
FLUFFE	

Unit Price	You Pay
$6.60 Per Gal.	$1.65 Per Qt.
CLEAN-O	

Unit Price	You Pay
$4.38 Per Gal.	$4.38 Per Gal.
MIGHTY BRIGHT	

Questions To Be Asked After Reading

1. What is the easiest way to determine the best buy?
2. What is the difference between unit price and actual price?

SUMMARY ACTIVITY

Compute the cost of each blank.

Unit Price	You Pay
$2.99 Per Qt.	? 1 gal.
OLIVE OIL	

Unit Price	You Pay
? Per Gal.	$1.79 1 Pt.
SPECIAL SAUCE	

APPLICATION ACTIVITY

Which is the better buy?

UP	YP		UP	YP
$2.29	$1.09	or	$2.39	$1.79
Per Pt.	7 oz		Per Pt.	12 oz
Brand A			Brand B	

UP	YP		UP	YP
66¢	$1.98	or	69¢	69¢
Per Lb.	3 Lb.		Per Lb.	1 Lb.
Brand C			Brand D	

UP	YP		UP	YP
$1.60	30¢	or	$1.54	77¢
Per Qt.	6 oz		Per Qt.	1 Pt.
Brand E			Brand F	

UP	YP		UP	YP
99.5¢	$1.99	or	$1.25	$1.25
Per Qt.	1/2 Gal.		Per Qt.	1 Qt.
Brand G			Brand X	

COMMENTS TO THE TEACHER

UP = Unit Price
YP = You Pay

Theme Foods Content Area: Social Studies-Global History

TOPIC

How did the discoveries of the Commerical Revolution change the eating habits of people around the world?

PERFORMANCE OBJECTIVES

Content Area Objectives: Students will be able to:

- locate on a map how the potato got from Peru to Ireland and back again to the "New World"
- describe how a food (potatoes), which originated in the "New World," became a common food for people around the world.
- explain how the exchange of the potato between the New World and Europe is an example of cultural diffusion
- explain how the potato influenced Irish migration to the United States

Reading/Writing Objectives Students will be able to:

- select the main idea of a reading selection
- place the various movements of the potato in sequential order
- draw inferences from the reading selection

MATERIALS

wall map of the world

duplicate reading selection

MOTIVATIONAL STRATEGIES

Have students rank the following foods from their least favorite to their most favorite:

--peanut butter
--french fries
--corn on the cob
--tapioca pudding
--sweet potato pie
--strawberry jam
--vanilla ice cream

After a few students share their favorite foods with the class, tell them that they would probably not be enjoying any of these foods if the Commercial Revolution (Europe's "discovery" of a "New World") had not taken place. None of these foods originated in the United States or in Europe.

Tell the class that today they will read about one of these foods -- the white potato. Ask them, "What questions can we raise about the origin of the potato?" Some possible students' question will be:

- Where did the potatoe come from?
- When was it discovered?
- How did it get to Europe and the United States?

PREPARATION FOR READING

- Tell students that they will read a passage which includes the answers to the questions they have raised. As they read, they should focus on finding these answers.

- In preparation for the reading, introduce the class to some special vocabulary words. On the chalkboard, write the following sentences which contain contextual clues for the underlined words. Then have students explain the meaning of each under lined word.

    - One room in the museum contained pre-Columbian art, while another room contained art done after Columbus discovered America.
    - American teenages eat hamburgers and french fries so regularly that these could be called teens' staple foods.
    - After thawing the ice cream turned to soup.
    - Because of crop failures famine was everywhere and people starved by the thousands.

- Tell students that the selection they will read mentions several countries that they should be able to locate. using the wall map point out or have students point out the positions of Peru in South America, Spain, Ireland and England in Europe and the United States in North America.

SUPERVISED SILENT READING

Questions To Be Asked After Reading

- How did the potato get from Peru to the MacDonald's on _______ Avenue?
- Have students come up on the wall map and trace the potato's route.
- Explain the concept of time sequence to the class. Then ask them to place the following events in correct sequential (chronological) order:

- The potato is introduced to North America by Irish settlers.
- The Spanish explorers take the potato back to Europe.
- The potato becomes an important food in Europe.
- Incas grow potatoes in Peru before the coming of Columbus.

. Present the class with three possible titles for the reading. Explain that one of the titles is so big that it takes in more than is found in the reading selection. Another is so narrow or small that it does not cover the main idea of the reading. The best title is the one that best fits the ideas contained in the reading selection.

- The Potato in Pre-Columbian Peru
- The Global Impact of the Potato
- A Short History of the Potato

. In our study of history we have met many examples of "cultural diffusion." As you know, cultural diffusion is the exchange of ideas and products between societies and the changes that result from these contacts. Why is the voyage of the potato a great example of cultural diffusion?

. There is a large Irish-American population in the United States today. How is this an indirect result of the history of the potato?

SUMMARY ACTIVITY

Give the class a second opportunity to place the text material in sequential order by making use of a time line as follows:

A B C D

________/________/________/________/____

1500 A.D. 1800 A.D. 1900 1983

Have students place the events listed below in the correct time period (A, B, C, D) on the above time line.

1. The potatoe famine in Ireland causes large numbers of people to move to the United States.
2. Before the coming of Columbus the potato was a staple of the Incas diet.
3. The Spanish explorers bring the potato to Europe.
4. McDonalds produces its first french fries in the United States.

APPLICATION ACTIVITY

Ask students to write a paragraph at home in which they describe how any other food found its way to the American table. A reference book (encyclopedia or unabridged dictionary) might have to be consulted.

COMMENTS TO THE TEACHER

FOOD/SOCIAL STUDIES (Reading)

TITLE: "   "

Like other American Indians, the people of pre-Columbian Peru ate corn, but their staple food was the white potato. The Indians would leave their small potatoes out to freeze in the cold Andes nights. The potatoes were then thawed, smashed to a mush, dried in sheets, and eaten like bread.

In the 1500's, Spaniards who came to America took this valuable plant back to their homeland, and it soon was grown in other European countries. In Ireland the potato became the major food. Because Irish settlers introduced the potato into England's North American colonies, it became known as the "Irish potato." Ireland suffered a severe potato famine in the middle of the nineteenth century, resulting in large numbers of Irish immigrants settling in the United States.

Today in Peru and Bolivia descendants of the Incas still eat breadlike sheets of potatoes that have been frozen, thawed, and dried.

THEME: Food CONTENT AREA: Science

TOPIC

How is the heat energy of food measured?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- Use a calorimeter to measure the heat given off by burning cooking oil.
- demonstrate awareness of safety rules in laboratory.

Reading/Writing Objectives Students will be able to:

- Read for sequence in a set of directions
- Identify typographical clues in instructions.
- Record data in a laboratory report.

MATERIALS

Celsius thermometer
tin can calorimeter
triple beam balance
graduated cylinder
wooden splint
matches
2 heat-resistant pads

small crucible
250 ml. beaker
water
cooking oil (Mazola)
string
tongs
laboratory worksheets

Note: The size of the beaker should be such that it fits exactly on top of the tin can calorimeter.

MOTIVATIONAL STRATEGIES

Demonstrate a tin-can calorimeter set-up. Explain that the apparatus is used to measure the heat energy given off by a burning substance. Display a bottle of Mazola cooking oil and ask: "How can we find out how much energy our bodies will get from eating this oil?"

PREPARATION FOR READING

Disassemble the tin-can calorimeter apparatus. Review the names of the component parts. Have the students suggest the function of each component.

Read the Introduction to the Laboratory Worksheet.

a) What is a calorie?
b) How do we measure a calorie?

Pronounce new vocabulary items:

crucible
calorimeter
cylinder
celsius
temperature
heat-resistant

LABORATORY WORKSHEET

NAME ______________________________ CLASS _______________ DATE _______________

PROBLEM: How can we measure the heat energy of cooking oil?

INTRODUCTION: Heat energy is measured in units called calories. A calorie is the amount of heat that will raise the temperature of one grain of water by one degree celsius. Today we will be using a tin can calorimetr, which is an instrument used to measure heat, to find the number of calories in cooking oil.

MATERIALS: Celsius thermometer, small crucible, tin can calorimeter, beaker, triple beam balance, water graduated cylinder, cooking oil, wooden splint, string, matches, tongs, two heat-resistant pads.

PROCEDURE:

1. Tie a three inch piece of string at the center of a one-half inch piece of wooden splint to form a wick. Place the wick in the CRUCIBLE.
2. Use a TRIPLE BEAM BALANCE to weigh the crucible and the wick. The weight is ________g.
3. Add five grams of weight to the beam. Pour oil into the crucible slowly until the beam is balanced at the zero point. The total weight is now ________g.
4. Using a GRADUATED CYLINDER, measure 100 milliters of water and pour it into your beaker. (One milliter of water weighs one gram.) The weight of the water is: 100 ml. X 1 g = ________g.
5. Measure the temperature of the water in the beaker using the CELSIUS THERMOMETER. The temperature is ________ °C.
6. Place the crucible on a heat-resistant pad. CAREFULLY light the STRING WICK in the crucible and CAREFULLY lower the TIN CAN CALORIMETER over the burning oil.
7. Place the beaker with water on top of the tin can. Hold the thermometer in the beaker and allow the water to heat for FIVE MINUTES. The water temperature at the end of five minutes is ________°C.
8. QUICKLY AND CAREFULLY
   - a) Remove the thermometer.
   - b) Move the beaker to a heat-resistant pad on your desk.
   - c) Lift the tin can with your TONGS.
   - d) GENTLY blow out the burning oil.
9. Reweigh the crucible, wick, and remaining oil. The new weight is ________g,

SUMMARY/HOMEWORK

1. Do the arithmetic.
   a) The heat from the oil caused a change of ______°C in the water.

Temperature Before Heating	=	Temperature After Heating	=	Change In Temperature
______°C.		______°C.		______°C.

   b) Calculate the amount of heat absorbed by the water:
   Heat (Calories) = Weight of Water (g) X Change of Temperature (°C)
   ______cal. = ______(g) x ______°C

   c) The total heat energy given off by the cooking oil is equal to _______ calories.

   d) Calculate the number of calories per gram of cooking oil.

$$\text{Calories} = \frac{\text{Total Calories Given Off Per Gram}}{\text{Change in Weight of Crucible, Oil, and Wick}}$$

_______ cal./g = _______ $\frac{\text{cal.}}{\text{g}}$

SUPERVISED SILENT READING

Read "Procedure" one step at a time of Laboratory Worksheet.

Questions To Be Asked During Reading

1. What equipment are we to use?
2. How are we to use this equipment?
3. Why are we using this equipment?

Questions To Be Asked After Reading

1. How did we identify the equipment we are using quickly from the directions?
2. Where do we record our data?
3. How were we alerted about safety precautions?

SUMMARY ACTIVITY

See Summary/Homework

APPLICATION ACTIVITY

1. Students collect food labels and determine the energy content of the food from the nutrition statements on the labels.
2. Compare the number of calories in equal weights of different foods using calorie charts.

COMMENTS TO THE TEACHER

Several weeks before this lesson, students should be asked to bring in cans from canned vegetables. These cans should be empty with one end still intact. Prepare calorimeters by punching four holes in the sealed end of each can and two holes as vents near the open end. (A beer can opener should be used.)

Theatre Arts/Media – Related Lessons

Theme: Theatre Arts **Content Area:** Communication Arts

TOPIC How can a reader's imagination enrich the meaning of a story?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- identify and evaluate the various points of view presented in the story.
- describe the ways in which people deal with their fears.
- role play situations from the perspectives of different characters.

Reading/Writing Objectives Students will be able to:

- predict the outcome of the story based on clues given.
- infer what the thing in the cellar is.
- rewrite the story in dialogue form.

MATERIALS

Duplicated copies of "The Thing in the Cellar," in *Imagination: The World of Inner Space*, ed. by Margaret Howard and Dr. William Goody-Koontz (Scholastic Books, Inc.).

MOTIVATION

Have students brainstorm childhood/adolescent fears and the ways in which adults respond to them.

Brainstorm: Think back to when you were a child. What fear(s) did you have? Do you know why these things frightened you? How did the adults around you react? How are adolescent fears different? Can adults help in either case? Why or why not?

PREPARATION FOR READING

Vocabulary: to be presented in context

1. ignore
2. crawl
3. spank

SUPERVISED SILENT READING

Questions to be Asked During Reading

1. How does Tommy reveal his fear?

2. What do you think is hiding in the cellar?

3. How do Tommy's parents feel at the end of the story?

Questions to be Asked After Reading

1. How do the three adults differ in their response? With whom do you agree and why?

2. What kinds of punctuation are used to reveal the characters' emotions?

3. How does the author help you predict the ending?

SUMMARY ACTIVITY

1. What questions are still left unanswered at the end of the story? Why?

2. How does the author build suspense?

3. What role does your imagination play in increasing the scariness of the story?

APPLICATION ACTIVITY (select one or more)

1. Rewrite the story in play form.
2. Roleplay various parts of the story.
3. Write a description (with an illustration) of what you think was hiding in the cellar.
4. Write a newspaper account of Tommy's tragedy.

COMMENTS TO THE TEACHER

Set the tone for the story by shutting off the light, gathering seats into a circle. Create a "spooky" atmosphere.

The Thing in the Cellar

By David H. Keller

What was hiding down there, in the darkness?

It was a large cellar. It was much bigger than the house above it. The owner said it was built for a different kind of house. Probably the first house had burned down. Then a smaller house was built to take its place.

A winding stone stairway joined the cellar with the kitchen. At the bottom of the stairs each owner had put his firewood and his junk. The junk slowly piled up over the years. It formed a big wall. For hundreds of years no one had gone beyond the wall. No one had gone into the darkness of the cellar.

At the top of the stairs, separating the kitchen from the cellar, was a heavy wooden door. The door was as strange as the cellar. It didn't seem to fit with the rest of the house. It was too thick. The lock was much too strong. It was not the sort of door you would expect to find in a small modern house.

From the earliest months of his life, Tommy Tucker seemed unhappy in the kitchen. In all the other rooms of the house, especially on the second floor, he acted like a normal child. But when he was carried to the kitchen he began to cry. His mother spent most of her time in the kitchen, cleaning and cooking. Tommy stayed there with her while he was a baby. Most of the time he was very unhappy.

When Tommy could crawl, he would not stay with his mother in the kitchen. As soon as she turned her back, he crawled into another part of the house. When he was brought back to the kitchen, he screamed so loudly the neighbors could hear him.

Until Tommy learned to talk, his parents didn't know why he hated to be in the kitchen. Even when he could talk, his parents still didn't understand him.

What they finally learned was this: If the cellar door was shut and locked tight, Tommy would stay in the kitchen peacefully. If the door was closed, but not locked, he shook with fear, but kept quiet. If the door was open, even a tiny crack, the little boy would scream and scream. It was very bad when his father would not let Tommy leave the kitchen.

Tommy had two strange habits when he played in the kitchen. He would push rags, scraps of paper, and other trash under the thick wood door. He tried to fill the crack under the door. Even when he was spanked for making such a mess, he wouldn't stop. The other habit was just as strange. Once the door was closed and locked, he would go over to the big lock and rub it gently. As he grew older, he used to kiss it.

Tommy's father was upset. He didn't like the way his son was acting. He spanked him, but it did no good. Tommy's mother was easier on him. He loved her and helped her with her work. But one thing he would never do. That was to carry things between the house and the cellar. If his mother opened the door, Tommy screamed and ran away. He would not come back until the door was closed.

Since they couldn't change him, Tommy's parents decided to ignore his strange ways. They ignored them until Tommy was six and it was time for him to go to school. Tommy was strong and smart. His father was proud of him. Except for his fear of the cellar. Finally, Tommy's parents took him to a doctor.

"Tommy is old enough to go to school. Dr. Hawthorn," said Mr. Tucker. "But he acts like a baby about our cellar. My wife and I thought you could tell us what to do. It must be his nerves."

Tommy's mother told the doctor all about the strange things Tommy did. Then the doctor listened to Tommy's heart. He checked his eyes, ears, and lungs. "Looks like a fine, healthy boy to me," he said at last. "Has he ever been sick?"

"Only once or twice. He cried himself blue in the face," said Tommy's mother.

"Was he afraid of something?"

"Maybe. He was always in the kitchen when he cried. There are stairs there that lead to the cellar. He seems to fear something in the cellar."

"Let me talk to Tommy alone," said Dr. Hawthorn. His parents left Tommy alone with the doctor.

"Tommy, what are you afraid of in the cellar?" asked the doctor.

"I don't know."

"Have you ever seen it, or heard it, or smelled it?"

"No, sir."

"Then how do you know something is there?"

"Because there is."

That's all Tommy would say. The doctor was upset, just like Tommy's father. He called Mr. and Mrs. Tucker in. "He thinks there's something in the cellar."

"That's silly," said Mr. Tucker.

"It's just a regular cellar, filled with junk," said his mother. "I go down there every day. I know nothing's there. But Tommy has always screamed when that door was open. Even when he was a tiny baby."

"Here's my advice," said the doctor. "He thinks there's something there. When he finds out he's wrong, he'll forget it. You must prove there's nothing in the cellar. He's been spoiled. Open that door and make him stay alone in the kitchen. Nail the door open so he can't close it. Leave him alone for an hour. That will show him how silly it is to be afraid of an empty cellar."

On the way home, Tommy tried to run away from his parents. When they got home, Tommy hid under a bed. He ate no supper. After the dishes were done, Mr. Tucker took down his toolbox. He got out a hammer and some long nails.

"I'm going to nail the door open, Tommy, just like the doctor said. You must be a man and stay here alone for an hour. We'll leave the light on. Then you'll see there's nothing to be afraid of. We'll be proud of you."

But Mrs. Tucker cried and kissed Tommy. She asked her husband to wait until the boy was bigger. Mr. Tucker refused. So the door was nailed open. Tommy was left alone. He stared at the dark open space. His eyes were like a hot burning flame.

That same night Dr. Hawthorn had supper with a friend, who was a special children's doctor. Dr. Hawthorn told Dr. Johnson about Tommy. He asked for Dr. Johnson's opinion of Tommy.

"Children are odd, Hawthorn. Perhaps they are like dogs. It may be that their nervous system is better than ours. We know that we have limited eyesight, hearing, and smell. I believe that there is a form of life which we can't see or hear or smell. Tommy Tucker may know of something in the cellar which his parents can't sense. I'm not saying there *is* anything in the cellar. But I'd like to know what makes Tommy think so. Give me the address and I'll see him tomorrow."

"What do you think of my advice to the family?" asked Dr. Hawthorn.

"Sorry, old man, but I think it's terrible. If I were you, I'd stop there tonight and tell the parents not to do it. Tommy may be badly scared."

"But there's nothing in the cellar," said Dr. Hawthorn.

"Perhaps not. But he thinks so."

Dr. Hawthorn was worried. He rushed through the cold, foggy night to the Tucker house.

"I've come to see Tommy," he told Mr. Tucker.

"He's back in the kitchen," said the father.

"He gave one cry, but since then he's been quiet," sobbed Tommy's mother.

"If she'd had her way, we wouldn't have done it," said Tommy's father. "Now Tommy knows there's nothing to be afraid of. His hour is up. Let's get him and put him to bed."

Mr. Tucker led the way to the kitchen. He opened the kitchen door. The room was dark.

"Wait till I get the light on," said Mr. Tucker.

"Tommy! Tommy!" cried Mrs. Tucker.

The doctor ran to where a little body was lying on the floor. He called for more light. Shaking, he looked down at what was left of Tommy Tucker. He stared down the open space to the cellar.

"Tommy's been hurt," he said. "He's dead."

The mother threw herself over the torn body of her son.

Mr. Tucker took his hammer and nails and closed the door. Then he locked it.

"What killed him, Doctor? What killed my son?" he shouted.

"How do I know?" said the Doctor, with fear in his throat. "How do I know? Didn't you tell me that there was nothing down there? Nothing there — in the cellar?"

What do you think killed Tommy? Why did it kill him?

THEME: Theatre Arts **CONTENT AREA:** Communication Arts

TOPIC What role does fate play in our lives?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- trace plot through its various stages: rising action, climax.
- observe the irony resulting from the disparity between the desired and actual outcome of the wishes.

Reading/Writing Objectives Students will be able to:

- determine cause and effect relationships.
- write original endings.

MATERIALS

Duplicated copies of the play "The Monkey's Paw," in Imagination: The World of Inner Space, by W. W. Jacobs (Scholastic Books, Inc.).

MOTIVATION

1. Brainstorming: What would you do if you had a magic charm but were warned against using it?

- or -

2. Displays various "good luck charms" such as a rabbit's foot. Students share their thoughts and experiences in relation to these charms.

TRANSITION

Do you believe that fate decides how your life will be or can you determine your own fate?

PREPARATION FOR READING

Vocabulary - to be presented in context:

1. coincidence
2. pound (money)
3. mortgage

SUPERVISED SILENT READING

Questions to be Asked During Reading

1. What were the three wishes?
2. When do you know that something has happened to Herbert?
3. How does his mother react?

Questions to be Asked After Reading

1. What do you think was knocking at the door?
2. Considering the ending, do you think Mr. White's last wish came true?
3. What was the most exciting point in the story?
4. How did the author lead up to it? Chart plot on chalkboard
5. How does the difference between what you expect "magic wishes" to bring and what they actually bring make you feel?

6. How was the true nature of the paw hinted at early in the play?

ELICIT:

- holy man's spell (p. 44).
  Sargeant Morris turns pale at the thought of his wishes (p. 45).
  Morris got the paw because of its previous owner's wish for death (p. 45).

SUMMARY ACTIVITY

1. In your own words, explain how you think the paw works.

2. What advice would you give to someone who received the paw?

APPLICATION ACTIVITY (select one or more)

1. Write a scene in dialogue form.

2. Write a new, happy ending for the play.

3. Write a short story or essay on the subject "Three Wishes I Wish Would Never Come True."

COMMENTS TO THE TEACHER

1. Students respond enthusiastically to the play if "ambiance" is created. Turn off lights, draw shades, etc.

2. Allow sufficient time for the application. Students enjoy doing the original scripts in groups. Have an "Academy Awards" ceremony for best actor, best script, etc.

The Monkey's Paw

By W. W. Jacobs

From India—a magic charm, three wishes, and unexpected horror

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CHARACTERS

NARRATOR
MR. WHITE
MRS. WHITE
HERBERT WHITE
SERGEANT MORRIS
STRANGER

SCENE I

NARRATOR: It is a cold, wet night outside. We are inside a warm, cozy house. A fire is burning brightly in the fireplace. An old man, Mr. White, and his son, Herbert, are playing chess. Mrs. White is knitting by the fire. They are expecting a visitor — Sergeant Morris, who has just come back from India. There is a knock at the door.

MR. WHITE: There he is. I'll let him in.

NARRATOR: Mr. White goes to the door and returns with a tall, red-faced man. Sergeant Morris shakes hands with everyone and goes to the fire.

SERGEANT MORRIS: Ah, this feels good! It's really cold outside.

MR. WHITE: Even with this bad weather, it must be good to get back home to England. I wouldn't like to spend so many years in a place like India. You hear so many stories about the strange customs over there.

HERBERT: I'd love to go to India! It must be interesting. England is so dull. Nothing exciting ever happens here.

SERGEANT MORRIS: No, Herbert. Your father is right. It's better here.

MR. WHITE: Speaking of strange customs. why don't you tell us more about that monkey's paw we've heard about?

SERGEANT MORRIS: There's nothing to it, really. Just some strange old Eastern magic.

HERBERT: Oh, please tell us! It's a good night for a story.

SERGEANT MORRIS: Well, it looks just like an ordinary paw. Nothing special about it.

NARRATOR: He takes a small paw from his pocket and gives it to Herbert.

MRS. WHITE: Ugh! Herbert, how can you touch that awful old thing?

MR. WHITE: It sure doesn't look like magic. What's so special about it?

SERGEANT MORRIS: An old holy man in India put a spell on it. He wanted to show that fate rules people's lives, and that if you mess with fate, you'll get hurt. He put a spell on the paw so that three different men could have three wishes from it.

MRS. WHITE: You sound so serious about it! It's just an ugly old paw, after all.

HERBERT: Why don't you make three wishes on it, Sergeant Morris?

SERGEANT MORRIS (*looking hard at Herbert*): I have. (*He turns pale at the thought.*)

MRS. WHITE: Well, did you really get the three wishes?

SERGEANT MORRIS: Yes, I did. But let's not talk about it.

MRS. WHITE: Has anyone else wished?

SERGEANT MORRIS: The first man had his three wishes. I don't know what the first two were. But the third wish was for death. That's how I got the paw.

HERBERT: You mean he wished to die, and he did?

SERGEANT MORRIS: Yes.

MRS. WHITE: So what? It's probably just a coincidence.

MR. WHITE: I'm not so sure. If you've had your three wishes, why don't you give the paw to someone else?

SERGEANT MORRIS: I thought of selling it, but I don't think I will. It has caused enough trouble already.

NARRATOR: Sergeant Morris picks up the paw and throws it on the logs burning in the fireplace.

MR. WHITE: Don't do that! (*He snatches the paw from the fire.*) Sergeant Morris, if you don't want the paw, then give it to me.

SERGEANT MORRIS: Take it. But you're a fool if you do. And don't blame me for what happens. Listen, be sensible. Burn it.

MR. WHITE: No. I want it. How do you make the wishes?

SERGEANT MORRIS: Hold it up in your right hand and wish aloud. But I warn you of the result.

NARRATOR: Mrs. White gets up to make dinner.

MRS. WHITE: Why don't you wish for four pairs of hands for me?

SERGEANT MORRIS: If you *must* wish, wish for something sensible. But I think you'll be sorry.

NARRATOR: The monkey's paw was forgotten during dinner. For the rest of the evening the Whites listened to Sergeant Morris talk about India.

SERGEANT MORRIS: My goodness, it's late. I've talked too much. I must be going. But before I leave, I wish you'd throw the monkey's paw away.

MR. WHITE: Don't worry, Sergeant. We'll be careful.

NARRATOR: Sergeant Morris puts on his coat, says good-night, and walks out the door.

HERBERT (*looking at the paw*): A magic monkey's paw — how silly! Wish to be a king, Father, then Mother can't boss you around.

MRS. WHITE (*laughing*): Wish for 200 pounds to pay off the mortgage.

MR. WHITE: Why not? Let's try it. (*He holds up the paw in his right hand.*) I wish for 200 pounds.

NARRATOR: Suddenly, he drops the paw.

MR. WHITE: Ahhh! It moved! It twisted like a snake! I swear it did!

MRS. WHITE: It couldn't have. It's just your imagination.

HERBERT: I don't see any money. (*He picks up the paw and puts it on the table.*) I guess it doesn't work.

MR. WHITE: There's no harm done. But it gave me quite a scare. Now let's go to bed and forget about magic for a while.

SCENE II

NARRATOR: Now it is the next morning. The Whites are eating breakfast.

MRS. WHITE: Isn't it funny how in the light of day your night fears seem so foolish? That paw is really silly. How could it grant wishes? Even if it could, how could wishes hurt you?

HERBERT: The money could drop on your head.

MR. WHITE: That's not how it happens. The wishes are granted so naturally it seems the paw has nothing to do with it. It seems like a coincidence.

HERBERT: Well, save some of the money for me. I've got to get to work. So long.

NARRATOR: Herbert goes off to work and the day passes as usual. Later, as it's getting dark, Mr. and Mrs. White sit down to tea.

MRS. WHITE: Herbert will have a laugh when he gets home. How could a monkey's paw give us 200 pounds?

MR. WHITE: Well, the paw did move in my hand, like it was alive. I felt it. What's the matter?

NARRATOR: Mrs. White does not answer her husband. She is watching a man who is standing at the gate. Finally he comes to the door. As Mrs. White lets him in, she thinks of the 200 pounds.

STRANGER: I was asked to come here. I'm from Maw and Meggins.

MRS. WHITE: Maw and Meggins? That's where Herbert works! Is anything wrong? Has anything happened to him? What is it?

MR. WHITE: Now, sit down, Mother. I'm sure he hasn't brought bad news.

STRANGER: I'm sorry —

MRS. WHITE: He's hurt! He's hurt, isn't he?

STRANGER: He was badly hurt. But he's not in any pain.

MRS. WHITE: Thank goodness! Thank —

NARRATOR: She stops when she looks at the man's face. She realizes what he has said. There is an awful silence.

Mr. White: What — what happened?

Stranger: He was caught in the machinery. He was killed instantly.

Narrator: Mr. White takes his wife's hands.

Stranger: The company wanted me to give you their deep sympathy.

Narrator: There is no answer. The old woman is pale. Her husband is hardly breathing.

Stranger: Maw and Meggins wish to give you some money. Your son was a good worker for them.

Narrator: Mr. White drops his wife's hand. He stares with horror at the Stranger.

Mr. White (*whispering*): How much money?

Stranger: Two hundred pounds.

Narrator: Mrs. White screams as Mr. White faints.

SCENE III

Narrator: The Whites buried their son in the cemetery two miles away. As the days passed, they hardly spoke. They had nothing to talk about except sorrow. It is now a week after the funeral. The old man is awakened at night by his wife.

Mrs. White: The monkey's paw! The paw!

Mr. White: Where? What's the matter?

Mrs. White: I want it! Where is it?

Mr. White: It's downstairs. But why do you want it?

Mrs. White: Oh, why didn't I think of it before? It's so easy!

Mr. White: Think of what? What are you talking about?

Mrs. White: The other two wishes. We've had only one.

Mr. White: Wasn't that one enough?

Mrs. White: No! We'll have one more. Get the paw and wish for Herbert to be alive again.

Mr. White: My God! You're crazy!

Mrs. White: No I'm not. Hurry! Get it and wish.

Mr. White: You don't know what you're saying.

Mrs. White: The first wish came true. Why not the second?

Mr. White: It was just a terrible coincidence.

Mrs. White: Go and get the paw and wish.

Narrator: Mr. White goes downstairs in the dark. He feels his way to the table where the monkey's paw lies. He rushes back to the bedroom. His wife's face is terrible to see.

Mrs. White: Hurry! Wish!

Mr. White: It's foolish and wicked. The paw is evil.

Mrs. White: Wish!

Mr. White (*raising his arm*): I wish my son alive.

Narrator: The paw falls to the floor. Mr. and Mrs. White are silent. They wait until the candle burns out. Then they go back to bed. They can't sleep. A stair creaks. A mouse runs through the wall. Mr. White takes a deep breath. He takes the matches, strikes one, and goes downstairs for another candle. At the foot of the stairs the match goes out. There is a quiet knock at the front door. Mr. White doesn't dare breathe. The knock comes again. He turns and runs back to the bedroom. A loud knock sounds through the house.

Mrs. White: What's that noise?

Mr. White: It's a rat. Just a rat.

Mrs. White: No, it's Herbert! It's my son!

Narrator: She runs to the door. Mr. White stops her.

Mrs. White: Let me go! I forgot the cemetery is two miles away. That's what took him so long. I must let him in!

Mr. White: You can't let him in!

Mrs. White: You're afraid of your own son!

Narrator: There is a knock, and another. The old woman breaks free. She runs downstairs. Mr. White hears the chain on the lock rattle.

Mrs. White: The lock is stuck! I can't reach it. Come and help me!

Narrator: Mr. White is on his knees. He is feeling for the paw. If only he can find it before the thing outside gets in! The knocks are coming loud and fast. He hears his wife drag a chair to the door. She climbs on the chair. He hears the bolt creak back. At the same time he finds the paw and holds it in the air.

Mr. White (*whispering*): I wish my son back in the grave.

Narrator: Suddenly the knocking stops. The door opens. A cold wind rushes up the stairs. A long cry of sorrow from his wife gives Mr. White the courage to run downstairs. He goes out to the gate. The street lamp shines on a quiet, empty road.

Why do you think Mr. White was afraid to open the door?

What was knocking? What did it look like?

If you had a magic charm, what three wishes would you make?

THEME: Theatre Arts **CONTENT AREA:** Mathematics

TOPIC

Box Office Management

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- State the differences between unit price and selling price.
- Compute change when items are paid for in dollar amounts.
- Explain a monetary value written in cents as a decimal.

Reading/Writing Objectives Students will be able to:

- Follow directions for preparing report.
- Produce legible box-office report.

MATERIALS

Duplicate form A & B

SUPERVISED SILENT READING

Questions To Be Asked During Reading

- What does "cost per unit" mean?
- Is there a difference between the cost price and the selling price?
- Name some souvenirs that would be for sale in a theatre.

Questions To Be Asked After Reading

- How much would 20 regular tickets cost?
- If 300 students attend the play, how much money would you take in?
- How much change would you give from a $10.00 bill if a person bought 1 T shirt and 1 poster?
- How many regular tickets must you sell to take in $125.00?
- How much change from a $10.00 bill would you give to a person buying 1 orange juice, 2 coffee, 3 donuts and a package of cookies? How much did these items cost you? How much did you make on the sale?

MOTIVATIONAL STRATEGIES

Duplicate and distribute forms A & B. Inform the students of the following:

Your school is putting on a play and you are the manager of the box office. The cost of producing the play is $3,000.

For Form A

- How many items must you sell to cover the cost of the production.

For Form B

- Will you make a profit or loss?

PREPARATION FOR READING

- Discuss the chart and stress the need to express monetary values as decimals.
- Ask students how many people they think will attend the theatre on one night.

SUMMARY ACTIVITY

Compare receipts with cost of items. How much profit or loss have you made?

APPLICATION ACTIVITY

Interview Student Activities Coordinator to compare your results with actual school sales at a theatre production.

THEATRE ARTS/MATH WORKSHEET

Form A

Item	Cost per Unit	Selling Price	Number Sold	Total
Tickets				
Regular	$5.00	$5.00		
Senior Citizen	$4.00	$4.00		
Students	$2.00	$2.00		
Refreshments				
Orange Juice	.25	.50		
Coffee & Tea	.20	.40		
Donuts	.15	.30		
Cookies	.15	.25		
Other				
T Shirts	$1.25	$3.50		
Posters	.50	$1.25		
Souvenirs	.50	$1.50		

Note: The cost for each production is $3,000.00

THEATRE ARTS/MATH WORKSHEET

Form B

Item	Cost per Unit	Selling Price	Number Sold	Total
Tickets				
Regular	$5.00	$5.00	100	
Senior Citizen	$4.00	$4.00	100	
Students	$2.00	$2.00	400	
Refreshments				
Orange Juice	.25	.50	150	
Coffee & Tea	.20	.40	350	
Donuts	.15	.30	100	
Cookies	.15	.25	75	
Other				
T Shirts	$1.25	$3.50	350	
Posters	.50	$1.25	100	
Souvenirs	.50	$1.50	200	

Note: The cost for each production is $3,000.00

Theme: Theater Arts **Content Area:** Social Studies/Communication Arts

TOPIC

How is the theater of ancient Greece different from theater today?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- identify similarities and differences in the theater of Ancient Greece and theater or movies today.
- hypothesize about how theater reflects the values of the time.

Reading/Writing Objectives Students will be able to:

- identify details in the reading.
- translate an event in a simple story into a brief scene.

MATERIALS

Duplicated copies reading selections on Greek theater and on myth of Hades and Persephone.

MOTIVATION

Ask the class: What are some themes in movies, television programs, or theater which you have enjoyed? List themes on the board.

(Some sample themes might be: Superhero overcomes evil. Young person overcomes some great odds -- poverty, handicapping conditions, racial discrimination, drugs. Young lovers are foiled.)

List some favorite actors and actresses. Try to imagine them performing in a play where they wear masks all the time. If we never saw Burt Reynolds' face, would he be a big money-making star? Could there be a theater that has no "stars"?

PREPARATION FOR READING

Would you expect the theater of ancient Greece to use the same or different themes than theater today? Why? What themes might be used? What inventions do we use in theater today that the ancient Greeks did not have? (Elicit microphones, lights, cameras, electronic music, comfortable chairs, special effects, multi-media equipment.)

How do you think the Greeks might build a theater and stage a play so that people in the audience could hear and see?

If possible, after students have speculated, show a picture or draw a diagram of an amphitheater. Ask, "Why would the Greeks use this type of theater?

Tell the class they are going to read a selection on the ancient Greek theater. Prepare them for the reading by writing on the chalkboard the difficult vocabulary in sentences which give contextual clues.

> The rock festival was presented in a amphitheater with 100 rows of seats all around.
>
> The play was a hit and the dramatist who wrote it won a prize.
>
> The play had only two main characters, so it did not cost much to pay the actors.
>
> The members of a chorus in a Broadway play usually want to become stars.

SUPERVISED SILENT READING

Questions To Be Asked During Reading

Are the themes different from today's themes? How? What else is different?

Questions To Be Asked After Reading

1. What differences were a surprise to you?
2. How did the Greek theater use the chorus?
3. Why do you think everyone went to the theater in ancient Greece?
4. What do you think the theater can tell us about the society of its time?

MEDIAL SUMMARY

Have a student summarize orally the main ways in which Greek theater is different from modern theater. Write out a cooperative outline on the chalkboard as an example of note taking technique.

INTRODUCTION OF READING 2

Tell students that they are going to read a myth and create a mini drama in the Greek style. Ask the students if anyone knows how the ancient Greeks explained the change of seasons?

If a student knows, have him or her tell the story. If not, ask the class, "What are your favorite seasons? Why? What would happen if it were winter all year round?"

Prepare students for the reading by telling them the names of the four characters and their functions:

Pluto, God of the Underworld
Persephone, a beautiful young girl who is the daughter of....
Demeter, goddess of the harvest
Zeus, Chief of the Gods.

Pronounce the names as you write them on the chalkboard.

Give any other vocabulary you think student will need help with in a sentence.

> The trees were full of apples; the fields were full of wheat. So the harvest would be good.

Also ask the class if they can guess the name of a fruit of which only the seeds are eaten and the rest is thrown away. You might also want to bring in a pomegranate (Chinese apple) to illustrate and share the seeds after the presentation of the student's scenes.

Questions To Be Asked During Reading

Let the purpose for reading be made clear by asking students to find how the story explains the change of seasons.

Write the following questions on the chalkboard correlated to each of the past three paragraphs.

Paragraph 1 - What happens to Persephone?
Paragraph 2 - How does Demeter punish the earth?
Paragraph 3 - What decision does Zeus make to solve the problem?

Question To Be Asked After Reading

How does the myth explain the change of seasons?
Why would people need a story to explain the return of Spring?

SUMMARY ACTIVITY

Ask students to cooperatively develop a short scene between Pluto and Persephone in which he tells her he wants her to become his queen and stay in the Underworld.

Write the scene on the chalkboard. Ask volunteer students to create comments on the scene which might be said by the chorus.

Divide the class into four groups and assign a paragraph to each group. Have the students chose a scene from the paragraph and cooperatively improvise or write it. Instruct them to include lines for the chorus.

Have each group present their scene to the class.

APPLICATION ACTIVITY

Have students write a paragraph on whether or not they would like to attend an ancient Greek play, giving reasons for their opinion.

The Theater in Ancient Greece

The theater in ancient Greece started from religious festivals. A chorus sang or spoke lines of poetry related to the actions of the Greek gods and heroes.

There were myths about why the seasons changed or how man received the gift of fire. Other plays told the history of Greek wars and battles. Sometimes, at the end of the play, a god came to solve the people's problems.

In the Greek theatre of long ago, there were no real actors as we know them today; everything was spoken by the chorus. then one dramatist named Aeschylius (Ehs-kuh-lus) created lines to be spoken by one actor representing a character. Later dramatists added more actors and presented the actions of men, women, and gods more realistically. Still, all the ancient Greek plays kept the chorus as part of the play. The chorus made comments on the fate of a character, prayed to the gods for aid, sometimes advised the characters about the actions they should take. The lines of the chorus usually represented the view of the people, the society of that time. Sometimes the chorus also spoke for the poet or dramatist.

The theaters in which the plays were presented were amphitheaters with seats cut from stone set into the hilside. The bowl shape of the theater helped the sound to carry. the actors wore masks and high platform shoes. the mouths of the maks were shaped to help the sound carry. A theater festival lasted all day, and all the citizens turned out for the event. Today many of the ancient Greek dramas are presented in the same ancient amphitheaters. the Greek dram is a gift which is still admired today all over the world.

Pluto and Persephone

Pluto was the god of the Underworld. He hated light and seldom left his gloomy home. One day, however, he visited the earth. There he saw the beautiful Persephone and fell in love with her. He grabbed Persephone and put her in his black chariot pulled by coal-black horses. He struck the earth with his spear, and the earth opened. The chariot plunged deep into the Underworld. Then the earth closed over them. Pluto made Persephone the goddess of the Underworld.

Persephone was the daughter of Demeter (di me' ter), the goddess of the harvest. Demeter missed her daughter. She looked everywhere for her. All she could find was the sash that Persephone had dropped before being carried into the Underworld. Demeter was filled with grief. She blamed the earth for taking her daughter away, and she punished it. She refused to let anything grow until Persephone came back to her. Flowers wilted and died. Leaves fell from the trees. Fields became cold. Cattle died. Seeds did not spring up and grow. The whole earth became brown, icy, and lifeless.

Then Demeter found out that the earth was not to blame. Persephone had been carried away by Pluto. Demeter needed help in getting Persephone back. She went to Zeus (zūs), the king of all the gods. Zeus said that if Persephone had not eaten anything in the Underworld, she could return to earth. A messenger of the gods took the news to Pluto. Pluto told Persephone she could leave. He did not tell her that she must not eat. As she was getting ready to leave, Pluto gave her some fruit to eat. Persephone had been very sad in the Underworld. She had refused all food. But this time Persephone accepted the fruit. The messenger tried to stop her from eating -- but too late! She had eaten six seeds of the fruit. Pluto demanded that Persephone spend six months of each year with him, one month for each seed she had eaten.

Persephone returned to Demeter. Every year, however, she returned to the Underworld and lived with Pluto for six months. During those months, Demeter was heartbroken. Nothing grew. The earth became cold and brown. Winter came to the world. When Persephone returned, Demeter was happy. Then she made the earth warm and green. She made it rich with crops and bright with flowers. The return of Persephone brought joy to Demeter and springtime to the world.

From Social Studies Staff of the Educational Research Council of America, *The Human Adventure, Four World Views* (Boston:Allyn and Bacon, Inc., 1971), pp. 74, 76, 77.

THEME: Theatre Arts **CONTENT AREA:** Science

TOPIC Why do we see matter?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- Determine that light is necessary in order to see.
- Distinguish between luminous and illuminated objects.
- Compare and contrast the transmission of light through various bodies.

Reading/Writing Objectives Students will be able to:

- Read a paragraph for cause and effect
- Accurately record observations in the form of complete sentences.
- Relate the prefix "trans" to the definitions of transparent and translucent.

MATERIALS

Shadow box (A shoebox or any other box that is painted with a flat black paint on the inside and contains a light source. The front panel is removed and a slit is cut across the top of the box so that various materials - opague, transparent translucent - may be placed in front of the light source.), Projector bulb, Bunsen burner, luminous disc, beakers, water, tiny glassbeads.

MOTIVATION

"When we go to the theater, the house lights are on and the curtain is closed. The play begins with the dimming of the houselights the opening of the curtain and the turning on of footlights and for spotlights. Why do these things occur?"

The students should offer some hypotheses which are to be posted on the chalkboard.

"In order to test these hypotheses what basic question must we answered?" Aim Why do we see matter?

PREPARATION FOR READING

1. Darken the room. Use the shadow box with and without light.

   a) When can we see?
   b) Why can we see?

2. Demonstrate a film projector bulb, a Bunsen burner flame, and a luminous disc. Identify them as luminous objects.

   a) Why are these objects said to be luminous?
   b) Why can we see the project bulb more clearly?
   c) Why are we able to see luminous objects?

3. Turn on the room lights. Display a variety of objects that are not luminous.

   a) How do these objects differ from those we have called luminous?

SUPERVISED SILENT READING

Questions To Be Asked Before Reading

b) If they do not produce light, why are we able to see them? (Read the paragraph to find the answer.)

Reading "You see this page because something travels from the page to your eye. That something is light, light is a pure form of energy that travels through space. A luminous object produces its own light energy. Objects which cannot produce light energy can be seen only if they reflect light energy from another source. You can see these objects only when they are illuminated by some outside source of light.

Questions To Be Asked After Reading

c) What is the meaning of the word illuminate?
d) Why can you see the sum?
e) If the moon is a non-luminous body, why can we see it at night?

4. Knowing what we now know about seeing, why are footlights and spotlights used in the theater? Discuss when it would be advisable to use a spotlight rather than foot lights.

5. Liken the shadow box to a stage. Place a card in the slit and then replace the card with a pane of glass. Have the students explain why they can see the stage with the glass but not with the card. Introduce the terms transparent and opague. Discuss under what circumstances they might want to use a transparent curtain rather than an opague curtain between acts (scenes).

6. Take a beaker and fill it with water. Have the students look through the water at a light bulb. Add tiny glass beads to the beaker and have the students look through the beaker. Students should write several complete sentences describing their observations.

   a) How did the addition of the beads change the way light traveled through the beaker? Establish that the beads diffused (scattered) the light rays and therefore, no definite shapes can be seen even though light is passing through the medium. Define the term translucent. Establish the significance of the prefix "trans" in the terms transparent and translucent.

SUMMARY ACTIVITY

a) Why can't we see objects on a darkened stage?
b) How would you enable the audience to see an object on a darkened stage?
c) When would you use a translucent curtain instead of an opague curtain?

APPLICATION ACTIVITY

a) Construct a stage setting using luminous and illuminated bodies. Write a set of lighting instructions for a scene using the stage setting.

b) Read a set of lighting directions for a scene in a play. Discuss the reasons for these directions.

Section 4

Developing a Thematic Unit in Communication Arts

HS PREP

Introduction to Communication Arts - Section 4

As a teacher of Communication arts, you are aware of the value of a thematic approach. Relating the objectives of the ninth grade curriculum to given themes is already a suggested approach to teaching communication arts. Your challenge will come in finding and creating appropriate materials for the PREP theme in your school and in working with other teachers of PREP students so that all subjects reinforce one another.

The thematic module illustrated in this section is sports. Lessons also illustrate many of the techniques which are part of good teaching, but are especially important to PREP students to prepare them for reading and to develop reading skills. The list below summarizes approaches incorporated in the module.

Preparation Through Directed Instruction; Motivational Strategies:

- Brainstorming: Introduce conceptual foundations of the material. Elicit students prior knowledge/experience related to these concepts through:
  - semantic mapping
  - categorization of ideas;
  - guided questioning; (written on chalkboard).
- Discussing personal experiences
- Interpreting pictures of illustrations
- Using appropriate media material, models, etc.
- Vocabulary development: With the students identify unfamiliar vocabulary or familiar words with new meanings.

  Use the chalkboard or a chart to present new words in context. Lead the students to read the new words by using familiar word recognition techniques (e.g. context clues, structural analysis).

  NOTE: If the reading passage is lengthy, introduce only the vocabulary which is needed for that particular lesson.
- Reading Purpose(s): Establish a definite purpose for reading so that students realize that they are reading or listening to a selection for specific ideas.
- Oral Reading: Act as a model and read aloud the entire story/chapter/passage, with the students following along. Or, intersperse your reading with specific questions, discussion. Or, read aloud the section that presents new or technical vocabulary, the basic concept, etc.

Supervised Reading: Have students read the story or passage silently and independently with your active guidance.

- Comprehension Probes: With focus on the performance objective, develop directed questions which may be posed;
  - . Before silent reading to guide comprehensive
  - . After silent reading as practiced in comprehension
- Application: Have students demonstrate their comprehensive of the content objective and mastery of the process objective through the completion of a relevant follow-up activity which may include:
  - . a written assignment;
  - . drama/role play;
  - . homework assignments;
  - . in-school group projects;
  - . an open book quiz;
  - . reading (on same topic) in a tradebook, magazine, or other materials such as (brochure, newsletter, newspaper).

Questioning: Questioning should guide students to become sensitive to the differences between questions of fact (literal) and opinions (interpretive), and should encourage them to move on from these levels to the creative (inferential) and critical levels of reasoning.

"Questioning is potentially your most important tool for helping students to understand and to interpret what they read. If the questions you pose are thought-provoking and stimulating, your students will grow in their ability to think critically about what they read."*

Writing Sample Assessment

In addition to the analysis of either the citywide writing assessment or the state writing test which the student has taken, it will be instructive to both you and the student for him or her to provide a writing sample within the first week.

Such a sample allows teachers to add information about student writing skills to that already compiled about student reading skills. The information is then used to make instructional decisions.

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*Morton Botel, How to Teach Reading (Chicago, IL: Follet Publ, Co., 1963).

Guidelines for Writing

Having students read what they have written is an important channel for improving both reading and writing. When students read their work aloud, they test out what they have communicated. When they attempt to improve their writing, they have greater pleasure in reading because they have greater appreciation for writing as such.

When they see themselves as writers and authors they become aware of books as real products composed of people like themselves, thus they begin to think of books and print more critically.

The writing process calls for students and teachers to involve themselves in an organic apprach to teaching and learning. Writing is not taught as a separate activity from day to day. It is ongoing and writers must take gradually increasing responsibility for their work.

In the same way that reading focuses on meaning, writing must also keep meaning as its primary focus. Meaning refers to the *student's* interests, purposes and values rather than something which is imposed upon him or her. The student writer, therefore, concentrates on his or her ideas--the message or content to be conveyed to others--rather than worrying whether or not the written piece is "correct." Concern with conventions and mechanics will come later, *after* the drafting, revising, and redrafting. Then, with help from editing tools such as checklists, dictionaries, and thesauri, students are shown *how* to edit and proofread. There is a time and place for these important activities. Concern for "correct" grammar and usage should never *precede* prewriting, drafting, and revising.

Establish routines for students to write regularly--every day, if possible. Motivate the student to use writing as a means of expressing and communicating experiences (real and vicarious), feelings and ideas--in daily journals, messages and letters, personal narratives, and reports on the content of what is read.

Be alert to student concerns and set up brief *non-threatening writing* activities: "Write how you felt about the game." "Which part of the science experiment did you enjoy most?" "Which character is most like people you know?"

Reading can be a springboard for writing. Students can interpret the story or article in the light of their own experiences and can respond to the author's ideas and feelings by offering their own, in agreement or disagreement.

Students should be made aware that writing is valued in school and in the world of work. A student whose favorite subject is science or industrial arts or social studies can be more easily motivated to read and write by referring to the particular content area, as students grow more interested and involved in the topic.

The teacher can best help the student by *responding to content* and by asking questions which help the student writer to express him or himself more clearly.

The Daily Journal

The journal, a record of events and feelings, serves the function of getting students into the habit of writing and increases their powers of observation. The teacher also writes (as the teacher reads in SSR) but keeps an eye on the class and encourages those who stop to continue.

Letter Writing

Real letters (a card to a sick classmate, an order for a free item, a response to a school problem, a letter to a public official) provide a purpose, establish the level of language for a specific audience, and involve a real world response to writing. Letters can serve as powerful motivation for writing in the first place, and then for revising and editing and proofreading for clarity and correctness.

Inquiring Reporter

This interesting writing activity builds on the students' newspaper reading and turns your students into inquiring reporters/photographers.

Aim

- To develop the art of questioning and writing down information.
- To give practice in getting information from primary sources.

To give practice in organizing information.

Development

1. Have students read and discuss the Inquiring Photographer for several days.
2. Formulate questions of interest to the students.
3. lead the group from simple "yes" or "no" questions to those that will elicit an opinion (from "Is it all right to chew gum in school?" to "Why do you think it is wrong to chew gum in school?")
4. Ask for volunteers to demonstrate asking and answering questions, with answers recorded on the chalkboard according to an agreed upon form, e.g.:

   Pat Doe Said, "I don't think students should chew in school because they leave the gum all over and it gets on people's clothes."

   Leslie White Said, "We should be able to chew. It helps us be less tense."

5. Pair students and have them alternate asking and answering different question, which the "reporter" records in notebook.

6. Circulate to help those "reporters" who need it.

7. Have each pair of students select a question of particular interest to ask of four or five people outside the classroom (in the lunchroom, other teachers, parents, etc.)

The answers should be shared with the class, perhaps in the form of a class newspaper.

FOLLOW-UP

Have each pair of writers organize their answers into a news or feature story by grouping the important and interesting facts that come out of the interviews.

Here is a sample: While most of the teacher are against gum chewing in school, the greater number of the students thinks it should be permitted, according to a survey conducted by reporters ____________________
and ____________________.

PREP AND WRITING RELATED TO CAREER EDUCATION

The infusion of information related to career opportunities in the field of Communications and media would be an effective motivation to the development of students' writing skills.

The following suggestions have been abstracted from materials prepared by Open Doors.*

Students can be encouraged to apply their developing writing skills through internship or community service activities, such as:

- Help a civic agency with letters.
- Help parent association with a newsletter.
- Job at a newspaper, radio station, hospital public relations department, book store, print shop.
- Help hospitalized patients or children by volunteering to read or write letters for them.
- Volunteer as a tutor for younger children in day care center, hospital.

In addition, students may study careers that depend on writing skills by inviting guests to the classroom or by independent interviews. The positions listed below do not all require professional writers, but they are all jobs that require good writing skills. The individuals who hold these positions would be well qualified to explain to students how writing well "pays off."

PERSONNEL OFFICER
Explains how to write a job-winning resume.

SECRETARY
Transcribes, but needs to assure that the facts are in good order, with correct spelling, grammar, punctuation.

LAWYER
Separates fact from opinion in writing a legal brief.

OFFICE MANAGER
Writes clear, crisp and concise memoranda to staff.

EDITOR
Selects copy that is interesting, well-written, newsworthy, and fits into a given space.

AD COPYWRITER
Writes clear, attention-getting copy.

Other workers who rely on writing for a living and might talk to a class:

- reporters
- lyricists
- speechwriters
- teachers
- engineers
- scientists
- executives
- police officers
- market researchers
- annual report writers

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[*] OPEN DOORS is a non-profit educational service linking New York City schools and the work world. It provides work-world information and curriculum, teacher workshops, speaker bureau and career day assistance. Its chief sponsor is the Economic Development Council of New York City and its host agency is the New York City Alliance of Business. Open Doors is located in Room 106, 110 Livingston Street, Brooklyn, New York 11201

PROTOTYPE OF NEWSPAPER LESSON (ENGLISH)

PERFORMANCE OBJECTIVES: Students will be able to:

- identify the main idea in a story.
- formulate meanings of words through context clues.

MATERIALS

Copies of front page of current day's newspaper and story which expands on headline. See attached copy for use with protctypical lesson.

DEVELOPMENT

1. Say: "Yesterday we looked at the various parts of the newspaper, and located different sections: horoscopes, sports, editorial, movie reviews, etc. Today we are going to look at what most of us notice first: the front-page story."
2. Continue: "There are a few words which you many not know in the story. I have written the sentence(s) in which these words appear on the board. Let us see if we can figure out the meanings of the unknown words from the sense of the sentence and paragraph in which they appear."
3. Write sentence(s) with unknown word(s), plus multiple choices to assist in meaning identification.

Example:

Divers, hampered by mud and strong currents, have so far recovered 12 bodies.

hampered means:
- a) placed laundry in basket
- b) helped
- c) bothered

current means:
- a) money in use in a country
- b) water flowing in a definite direction
- c) wires that bring electric light into homes

recovered means:
- a) got well after illness
- b) found and brought back
- c) covered up again

4. Have a student volunteer read sentences on chalkboard aloud. Assist with pronunciation of unknown word(s), if necessary.

5. Have class note context clues in sentence. For example:

   "divers" must mean there is water someplace;

   "mud" suggests that divers are probably at bottom, not near the surface of water;

   "12 bodies" makes us think that there must be a serious problem because there are bodies not living people there.

6. Elicit correct meanings of unknown words from sense of sentence in which they appear.

7. Read front-page (or lead) paragraph aloud, as students follow in their own copies. if lead paragraph of news story is being read aloud, teacher elicits, or defines, meaning of "lead paragraph": the opening paragraph of a news story, containing all the essential facts of the story.

8. Ask: "From what I have read, can you explain in your own words what happened?" Have students write their one or two sentence answers in their notebooks. Some students write their sentences on chalkboard; others read theirs aloud.

9. Using students' chalkboard work, underline statements in their sentences that emphasize death; and note, on chalkboard, such statements from students' oral reading. Elicit: plane crashed, death resulted, etc.

10. Compare students' suggestions with the headline in the paper. Write headline on chalkboard: "Death Plunge!" Elicit meaning of "plunge": that plane fell down (resulting in death of people on board). Say: "Notice that all suggestions refer to the fact that a plane fell to earth, crashed and burned, and that death resulted. Why have you -- and the writers in the paper -- all writeen about this fact: plane crashing?" Elicit: it's the most important thing in the story. Ask: "What do we call the most important thing(s) in a story? Elicit: main idea.

148

QUEENS SPORTS FINAL

DAILY NEWS

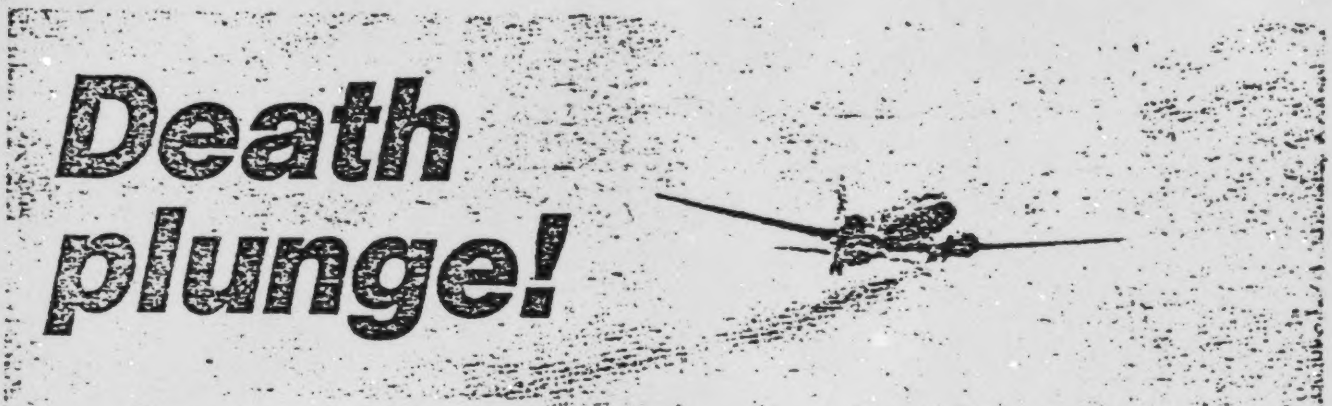
NEW YORK'S PICTURE NEWSPAPER®

★★★★ 30¢

Monday, May 2, 1983

Chance of showers. Mid 70s. Details p. 30

Death plunge!



Amateur fotog snaps final seconds of plane's flight

Trailing smoke from its flaming left engine, a U.S. Navy C-131 transport (top photo) limps toward Jacksonville Naval Air Station in Florida Saturday. Seconds later, it crased into the St. Jonns River (right), sending a huge ball of smoke and flames into the sky. Tom Radwanski, an amateur photographer out on his boat, saw the plane in trouble and began snapping with his 35-mm still camera. Fourteen persons, including Chief Warrant Officer Wake W. Balog, 36, of Yonkers and Aviation Storekeeper 3d Class Edward A Koch Jr., 21, of Spotswood, N.J., died in the crash. Divers, hampered by mud and strong currents, have so far recovered 12 bodies. Melissa Relly or Jacksonville was found alive.

Other pictures in centerfold

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Theme: Sports **Content Area:** Communication Arts

TOPIC

Olga and Nadia--Two Stars of Gymnastics

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

. identify information which describes the personality traits of each gymnast.
. recognize similarities and differences between Olga and Nadia.

Reading/Writing Objectives Students will be able to:

. make inferences based on limited information
. support an opinion by convincing use of evidence

MATERIALS

Duplicated copies of "Olga and Nadia--Stars of Gymnastics" in *The Challenge of Sports.*

MOTIVATION

Study the photographs on pages 3 and 5 of the text. What skills would you imagine are required by this sport? (Students discuss the appeal of gymnastics as a participatory and/or spectator sport.)

PREPARATION FOR READING

Brainstorming: semantic map of GYMNASTICS

Teacher uses root "gym" and elicits, through contextual clues, meaning of gymnasts; gymnasium; gymnastics.

Discussion and development of above topic. Students describe TV coverage of gymnastics, gymnastics class in school, etc.

Vocabulary Development:

T: Here are some words from today's story that you may or may not know:

Words to be presented in contextual sentences:

achievement--also note structural analysis
agility--also note structural analysis
emotional

SUPERVISED SILENT READING

Questions To Be Asked During Reading

Teacher reads aloud paragraphs 1-4, pp. 2-3.

T: Read the rest of this story to find out more about Olga and Nadia. As you read, think about the questions below. When you have finished reading, write your answers in your notebooks.

Teacher reminds students that answers are to be written in complete, well-constructed sentences.

Questions below are written on board, or distributed on rexos. Words "Guided Reading Questions" introduce the questions.

Guided Reading Questions:

1. What physical conditioning is most important to a gymnast?
2. What did Nadia accomplish in the 1976 Olympics?
3. Why did these 2 young women become world famous in such a short time?
4. What does Olga's crying tell us about her?

Questions To Be Asked After Reading

1. Students read aloud their answers to above questions, and discuss story. When necessary for purposes of clarification or emphasis, students reread appropriate passage(s) to verify their answers.
2. What do you think Nadia would have done if she had tripped, as Olga did?

SUMMARY ACTIVITY

T: Why is Olga's appeal more personal than Nadia's? Which one would you have most enjoyed watching on TV? why?

Students explain and justify their answers, citing evidences from the story. Teacher elicits specific references to similarities and differences between women.

CHART OF PERSONALITY TRAITS

OLGA	NADIA

APPLICATION ACTIVITY

If you had to arrange a blind date for a friend of yours, whom would you introduce him to: Olga or Nadia? Why?

In a well-planned paragraph (3-5 sentences) tell your friend about the girl you think he'll like, about her personality, her accomplishments as a sport star, and what you like about her.

Olga and Nadia–Two Stars of Gymnastics

The most graceful athletes in the world may be the gymnasts. Gymnasts perform on bars, rings, and other equipment found in many gymnasiums. Their timing must be almost perfect. Their muscles must be in top shape. They must be able to move their bodies smoothly and apparently without effort.

You have probably tried some gymnastic exercises yourself. You know how hard some of the exercises can be. You may have swung on the *rings.* These rings hang from long ropes and can move in many directions. You may have jumped on the *horse,* a large, stuffed, metal frame. You may have moved along the *parallel bars,* two bars side by side with a space between for your body to move. You may have chinned yourself on the *horizontal bar,* a single bar above your head.

You may even have tried tumbling or have felt the excitement of the *trampoline.* This is a sheet of canvas attached to a strong frame. You can bounce up and down on a trampoline, twisting and turning to your heart's content.

In the 1972 Olympics in Munich, Germany, the gymnastic team from Japan showed great agility in winning gold medal after gold medal. But the individual star of these events was a tiny Russian girl named Olga Korbut.

Olga's performance brought many cheers from the crowd. Olga was 17 and 4 feet 10 inches tall. She had the grace of a star. Olga had developed a new and original move on the *uneven bars.* These are like the parallel bars; but they are placed at different heights. Her new move on the uneven bars was called the "back flip." It brought more cheers from the crowd. They loved to watch Olga flying through the air. She seemed to spin so fast it was hard to follow every motion.

Olga won two gold medals and came in second in a third event. She might have done better, but she made one mistake. As *Sports Illustrated* put it, "She seemed to have wings. But at one point, doing a simple *glide kip* (a move to raise the body) that she had done many times before, she tripped. She was clearly out of the running. She went back to the bench and wept. The camera caught every tear." Everyone in the crowd felt sorry for her. They loved her all the more.

During the Olympics, many people watched the events on television. Often one person would say to another, "Did you see Olga?" She became famous overnight. She became so well-known she received letters that were merely addressed "Olga, Moscow"!

It is difficult to stay on top forever. Olga returned to the 1976 Olympics in Montreal to try to repeat her 1972 success. But another star arose, even greater than Olga. It was a bitter period for the young woman who had made headlines only four years earlier.

Nadia Comaneci (Com-a-NETCH) of Romania was even younger than Olga was in 1972. When the 1976 Olympics began, Nadia was 14 years old. To most of the world she was unknown. Everyone knew about Olga, but people asked, "Who's Nadia?" The world soon found out.

When a gymnast performs, different judges give different scores. The scores are added and then an average is taken. Few judges award a perfect score of 10 for any performance. Judges seldom agree exactly on a score. To get a perfect score of 10 from every judge is almost impossible. A perfect score had never been given in an Olympics match.

Nadia made a perfect score. She became famous overnight. And she didn't stop there. She kept on getting perfect scores. By the end of the Olympics, she had been given *seven* perfect scores! Some experts wondered if that achievement would ever be equaled.

Nadia won three gold medals, a silver, and a bronze. For her remarkable efforts she was named the top female athlete for 1976.

What happened to Olga during this time? Olga was also doing well—but not well enough. She won a gold medal as part of the Russian team and a silver medal on her own. But she won no individual gold medals. She tried her best and was still loved by the crowd. But Nadia was just too good.

The two girls have very different personalities. Olga is emotional. Tears flowed in the 1972 Olympics and in 1976. But she smiles and laughs, too. Her face tells what is going on inside her.

Not Nadia. She is calm, cool, always in control. Bela Karolyi has been coaching her since she was six. He has never seen her cry. She seems to have no fear. She can keep her mind completely on her work.

Most gymnasts reach their peak at 18. In 1976 Nadia still had four years to go. At fourteen she showed moves never seen before in gymnastics. People wondered what heights she would reach in the years ahead.

Olga's appeal is personal. The crowd lives with her and suffers with her. Nadia's appeal is different. The crowd doesn't worry, "Will she make it?" Somehow the crowd has complete confidence that she *will* make it. Nadia believes that, too.

Theme: Sports Content Area: Communication Arts

TOPIC

Lee Trevino--Self-Taught Champion

PERFORMANCE OBJECTIVES:

Content Area Objectives Students will be able to:

- identify information in the selection which describes the feelings and personality traits of the main character.
- to evaluate character based on the person's actions.

Reading/Writing Objectives Students will be able to:

- recall literal information contained in the selection.
- present ideas from the point of view of another person (e.g., Lee Trevino.)

MATERIALS

Duplicated copies of "Lee Trevino--Self-Taught Champion" in The Challenge of Sports.

MOTIVATION

Some athletes are as famous for their colorful personalites as for their athletic skills. Can you provide some examples?

Teacher puts chart on chalkboard:

ATHLETE	SPORT	COLORFUL PERSONALITY TRAIT(S)

Have class discuss: Do these qualities add to or take away from our enjoyment of each sport? Why?

PREPARATION FOR READING

Brainstorming: semantic map of GOLF

T: Today we will read about a well-known golfer, whom you may have watched on TV.

Teacher and students look at photograph on p. 54, note presence of gallery; discuss spectators' role in golf match.

Discussion and development of the sport, students' experience, etc. Teacher provides background to supplement students' information. (See: pp. 30-52, same text.)

Vocabulary Development:

T: Before we read about Lee Trevino, let us go over some words from the story which you may not know.

Words to be presented in contextual sentences:

- tournament
- amateur
- qualified
- consistent

Questions To Be Asked During Reading

Teacher reads aloud paragraphs 1 and 2, p. 53.

T: "What do we know about Lee Trevino?"

T: "What makes him a "colorful personality?"
(define term, if necessary)

T: "The rest of the story tells more about Lee and his career. As you read, think about the questions below. When you have finished reading, write your answers in your notebooks."

Remind students that answers are to be written in complete, well-constructed sentences.

"Try to answer the questions from memory, without looking back."

Questions below are written on board, or distributed on rexos. Words "Guided Reading Questions" introduce the questions.

Guided Reading Questions:

1. How did Lee get started in golf?
   (self-taught)
2. How did he make history in the 1968 Open?
3. According to this selection, how has Lee been doing recently?
4. Does the author expect things to change from now on? Why?
   (Trevino's perseverence, determination)

Questions To Be Asked After Reading

Students read aloud their answers to questions, and discuss story.

When necessary for purposes of clarification or emphasis, students reread appropriate passage(s) to verify their answers.

T: Some people say, "Lee is really through this time." But others say "Don't worry. Lee will be back!"

Which statement do you agree with? Why?

SUMMARY ACTIVITY

T: What is there about golf, and about Lee Trevino as a person, that makes some people want to be one of "Lee's Fleas"?

T: Would you want to be one of them?

Teacher encourages several points of view from students. As long as answers have substantive support, teacher does not seek closure.

APPLICATION ACTIVITY

Lee Trevino appears in a TV ad giving his daughter some hints about playing golf.

Based on what you now know about Lee's personality, his accomplishments, and his career, what important advice could Lee give his daughter about how to achieve happiness and success in life?

Write a well-planned TV script (3-5 sentences) in which you are Lee Trevino, telling your daughter what helped you in your life.

Lee Trevino–Self-Taught Champion

"I had to quit smoking on the golf course because I nearly choked to death while I was talking." These are the words of one of the most colorful personalities in professional golf, Lee Trevino. Lee does love to talk. He loves to joke. He enjoys life. He is outgoing, relaxed, and friendly. During a tournament he is followed on the course by a small army of people, who are very fond of him. These followers, called "Lee's Fleas," prove he is one of the most popular players in the game.

Lee has earned his happiness and his popularity. He has won a great deal of prize money. Usually, after winning a tournament, he writes a check for several thousand dollars to a local orphanage or charity. Lee remembers when his life was hard. He seems to appreciate the good fortune that has come to him and wants others to share in it.

Lee was born in Dallas, Texas, in 1939. He was raised by his mother and his grandfather, who had come to America from Mexico. The family had very little money. They lived in a house that stood near the golf course of the Glen Lakes Country Club. Lee used to watch the golfers play. "That looks like fun!" he decided.

At the age of six, Lee found an old golf club. He cut it down to a smaller size. He made up a two-hole course in his backyard and began to play. He was entirely self-taught. He developed what experts call "a terrible flat baseball swing." Even now his swing makes other golf pros shudder.

In his early teens, Lee became a helper to the groundskeeper at the country club. He did some caddying. That is, he carried a bag of clubs around the course for other golfers. He also played a few holes at a time. One day, at the age of 15, he played a *round* of golf. That is, he played a complete course of 18 holes. His score was a dazzling 77! Many a golfer is happy to "break 100" (score under 100). Lee was good even then.

Lee joined the Marines at 17 and played golf with Marine teams. He was discharged from the service in 1961 and took a job at Hardy's Pitch-N-Putt par-3 golf course in Dallas. Lee used to tie a Dr. Pepper soft-drink bottle to the end of his club and still hit the ball 100 yards. A soft-drink bottle is not designed for driving golf balls!

In 1965, Lee entered some tournaments. He placed first in the Texas State Open, second in the Mexico City Open, and fifth in the Panama Open. *Open* tournaments admit both professionals and amateurs. They draw the best golfers in the world.

Lee had made a fine beginning. But by 1967 he was discouraged. He decided not to spend the $20 registration fee for the United States Open trials. Without telling him, his wife sent in the money. Lee qualified for the finals by scores of 69 and 67, the best in the nation.

Lee finished fifth in the Open that year and was named Rookie of the Year by the Metropolitan Golf Writers Association. Lee entered the Open the following year and won. He became the third golfer in history to make the United States Open his first major victory. He was also the first player in history to shoot four rounds of 18 holes below par in the Open: 69, 68, 69, 69. This kind of consistent playing requires iron nerves. One or two bad shots can ruin the score on one or two holes. A bad score on one hole affects the total score. Mistakes are not easily overcome.

Lee made another first in 1971. He became the first player to win the United States, Canadian, and British Opens—all in one year! By the beginning of 1973, however, the word was out: "Lee has lost his touch." He played poorly in a number of major tournaments. Then in February came an important tournament in Florida. Lee had become dissatisfied with his clubs, so he borrowed a friend's set. Lee went on to win the tournament, one of the richest of all.

Then came another unhappy period for Lee. For 13 months he went without a victory. But in March 1974 he entered the Greater New Orleans Open Golf Tournament and played on the Lakewood Country Club course. Three years before, Lee had walked off this course in disgust. At that time, he said he'd never return.

Lee returned and again made golf history. He won the tournament by shooting 21 under par for 72 holes. He didn't shoot a single bogey. That means for 72 holes he never once shot a hole over par. He was 8 strokes ahead of his nearest rival. And so began another series of victories for Lee Trevino.

On August 11, 1974, Lee won the PGA Championships at Tanglewood Golf Club in North Carolina. A month later, on September 9, 1974, he won the World Series of Golf in Akron, Ohio. For this victory he had to defeat Gary Player in a "sudden-death play-off." The two golfers had tied and had to play extra holes to decide the winner.

On March 9, 1975, Lee won the Florida Citrus Open. Then came another time of disappointment for Lee. Perhaps an unusual accident brought Lee bad luck.

On June 27, 1975, while playing in the Western Open in Oak Brook, Illinois, Lee was struck by lightning. Two other players were also struck: Jerry Heard and Bobby Nichols. Jerry was able to complete the course and came in fourth. Lee and Bobby did not return.

Lee went on to play in other tournaments, but other players were the winners. Some people said, "Lee is really through this time." But others who know Lee better shook their heads and said "Don't worry. Lee will be back!" Lee had indeed traveled a long way from that two-hole golf course in his own backyard.

Theme: Sports Content Area: Communication Arts

TOPIC

Volleyball--The Lighthearted Sport

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- accurately describe the game of volleyball by referring to precise directions provided in the story.
- compare and contrast volleyball to other team sports.

Reading/Writing Objectives Students will be able to:

- recall literal information.
- identify the author's attitude toward the game he describes.
- write a persuasive letter giving two reasons for the position taken.

MATERIALS

Duplicated copies of "Volleyball--The Lighthearted Sport" in *The Challenge of Sports*.

MOTIVATION

Why are some sports more expensive to play than others? Give examples.

Chart on Chalkboard:

SPORT	REASONS FOR EXPENSES (space, equipment, special conditions, etc.)

Compare these requirements with the simpler needs of games such as volleyball. Students add details of experiences playing volleyball in gym, etc.

Class studies photograph on p. 76, notes evidence of vigorous action, fast play, etc.

"Today's reading is about volleyball, and you may find out some things about it that you didn't know."

PREPARATION FOR READING

Vocabulary Development:

Before we start reading, let's go over some words from the article which you may not know.

Words to be presented in contextual sentences:

lighthearted--also note structural analysis
international competition--also note structural analysis
principles
brigade (any group of people organized to do a particular thing)

DEVELOPMENT:

Teacher reads aloud paragraphs on p. 75.

T: "How does volleyball differ from other team sports, such as baseball or football?"

T: "Read the rest of the selection to find out more. As you read, think about the questions below. When you have finished reading, write your answers in you notebooks."

Teacher reminds students that answers are to be written in complete, well-constructed sentences.

T: Try to answer the questions from memory, without looking back.

SUPERVISED SILENT READING

Questions To Be Asked During Reading

Guided Reading Questions:

Questions below are written on board, or distributed on rexos.

1. Of all of volleyballs' good features, what are 2 that are mentioned several times in this article?
   (good exercise and fun)
2. In what way is volleyball similar to tennis?
   In what way it is different?
3. It's now more than 85 years since William G. Morgan invented this game. If he could see the way the game has developed, what do you think would surprise him the most?

Students read aloud their answers to questions, and discuss story.

When necessary for purposes of clarification or emphasis, students reread appropriate passage(s) to verify their answers.

Questions To Be Asked After Reading

1. Teacher asks for a volunteer to explain, based on the precise directions provided, but without looking at the text, how volleyball is played. Have other students evaluate, correct and make additions if needed.
2. To what other sports is volleyball similar? Explain how.
3. How does the author seem to feel about volleyball? Find specific passages in the story that show this attitude. What might the author have written if she or he didn't like the sport?

SUMMARY ACTIVITY

What more information about volleyball can we now add to our semantic map? What did you find out about it that you didn't know before?

APPLICATION ACTIVITY

Imagine that you are the director of a sports program at a local playground. You are trying to organize a volleyball team to play exhibition games in the neighborhood.

You do not have any money to offer well-known sports figures, but still you would like to interest some of them in playing on your new team.

Which sports stars would you invite?

Write a short invitation (3-5 sentences) to 1 or 2 of these people (men or women), telling why you think they would enjoy playing volleyball, and why it would be a better tournament if they join the team.

Be sure to give the names of the people you are inviting!

Volleyball–The Lighthearted Sport

Many sports use a lot of space. A golf course has acres of lawn, ponds, and forests. Football, baseball, and soccer require large playing fields.

Many sports make use of special playing conditions and a lot of equipment. Ice skating and ice hockey take place on a frozen surface. Skiing requires expensive equipment and lift tickets as well as travel to skiing areas. Lacrosse players need gloves, padded clothing, and sticks. Football teams spend thousands of dollars just on equipment.

Some sports, however, have very few frills. Volleyball belongs in this group. All one has to do is set up a net, or just a line between two poles. Find a volleyball and a few lively friends and you will be ready to begin.

Because volleyball is so simple, it is popular everywhere. It is played in school playgrounds and gymnasiums, on front lawns, at summer camps. In short, it can be played wherever people get together for a little exercise and some fun. It is also a sport played by teams at the Olympics.

The rules of volleyball are simple. An "official" game is played with six players on each side. Your purpose is to send the ball over the net so it will hit the ground on the other side. The opposing team tries to send it back before it hits the ground and make it hit the ground on your side. Players may hit the ball with any part of their body above the waist.

The volleyball court is 59 feet long and 29 feet 6 inches wide. The top of the net is 7 feet 11 inches above the ground. The net divides the court in half.

The game begins by the ball being hit across the net by the player who is standing in the rear right-hand corner of the court. When the ball flies over the net, the opposing team tries to hit it back. Players may hit the ball from one to another before sending it back.

Only the team that is serving the ball (starts it into play) can score a point. If the serving team gets the ball to touch the ground on the other side of the net, it scores a point. If the ball falls to the ground on the serving team's side, no point is scored. The ball then goes to the opposing team and they get a chance to serve.

After a team has served, the players rotate positions. The next time they get a chance to serve, a new player is the server. Fifteen points wins a game. But the winners must win by two points. If the score is 14–15, the teams must keep playing until one side is ahead by two points.

"Pickup" volleyball games can be played with a few or a dozen. Anyone can play. Volleyball can mix eight-year-olds and lively eighty-year-olds. If there are 21 persons at a picnic, sides can quickly be set up. An extra person on one side doesn't make too much difference. The score is less important than the laughter and the exercise.

Volleyball is the invention of one person. In 1895, William G. Morgan was a gym instructor at the YMCA in Holyoke, Massachusetts. He wanted to provide a lively game that could be played indoors or out. He also wanted a game for a lot of players. So he took some of the principles of tennis and combined them with ideas from other sports. The result was volleyball.

Once upon a time, volleyball was strictly an American sport. It has since spread around the world. There are international competitions and it is a game played at the Olympics!

Volleyball is a good body-conditioner. The London Fire Brigade adopted volleyball as a pleasant way to keep in shape. Volleyball is fine exercise. Even more important, it is a lot of fun.

Theme: Sports **Content Area:** Communication Arts

TOPIC

Arthur Ashe -- "Mr. Cool" of Tennis

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- analyze the influence of key people on Arthur Ashe.
- to compare and contrast two athletes (Ashe and Trevino).

Reading/Writing Objectives Students will be able to:

- recall literal information.
- identify information which describes the feelings and personality traits of the main character.
- accurately restate character in relation to the student's personal response to that character.

MATERIALS

Duplicated copies of "Arthur Ashe--'Mr. Cool' of Tennis" in The Challenge of Sports.

MOTIVATION

Who is the person in your family who has had the most influence on you? In what way has that person helped shape your character and personality?

TRANSITION

In this story about Arthur Ashe, we will be looking at the way two key people influenced him.

PREPARATION FOR READING

Brainstorming: semantic map of TENNIS

Discussion and development of above topic. Students offer personal experiences. Teacher directs students' attention to stories covered thus far: team sports (e.g., volleyball); individual sport (golf); notes--tennis has both.

Teacher and students study photograph, p. 105. (Elicit or explain meaning of "stamina.")

T: How would you describe the action to this photo?

T: Today's story is about this game, tennis, and this star, Arthur Ashe.

Vocabulary Development:

T: Let us go over some of the words from the story which you may not know, before we start to read.

Words to be presented in contextual sentences:

attitude
dominated
triumph
philosophy

DEVELOPMENT:

Teacher reads aloud paragraphs 1-2, p. 104 to top of p. 106.

T: Why does the writer mention: "60 pounds of bare bone?"
(Ashe was a very young boy.)

T: The rest of the selection tells about how Arthur Ashe learned to play tennis, and about what kind of person he is.

As you read, think about the questions below. When you have finished reading, write your answers in your notebooks.

Teacher reminds students that answers are to be written in complete, well-constructed sentences.

T: Try to answer the questions from memory, without looking back.

Questions below are written on board, or distributed on rexos. Words "Guided Reading Questions" introduce the questions.

SUPERVISED SILENT READING

Questions To Be Asked During Reading

1. Ronald Charity had a great influence on Arthur's game. Who had an influence on Arthur's personality? What was it that Arthur learned from this person?

2. How does Arthur's philosophy of life affect his tennis game?

Questions To Be Asked After Reading

When necessary for purposes of clarification or emphasis, students reread appropriate passage(s) to verify their answers.

1. How did Ron Charity influence the way Arthur Ashe played tennis? How did his father influence his attitude about life? What effect did this attitude have on his approach to tennis?
2. If you wanted to learn to play tournament tennis, would you want Arthur Ashe to coach you? Why?
3. Would his personality and style suit your personality? In what way would it or would it not?

SUMMARY ACTIVITY

Students may refer to their texts, previous notes, etc.

T: In what way are the experiences of Lee Trevino and Arthur Ashe similar? (Both started when they were young; both worked hard; both are popular with spectators.)

In what way are they different? (Lee gets upset; walks off course; loves to talk; is colorful personality. Arthur is more relaxed; controlled and cool.)

APPLICATION ACTIVITY

(Depending on students' interests and skills, this can either be a homework assignment or an informal classroom debate.)

Whom would you prefer to have around in an emergency: Lee Trevino or Arthur Ashe? Why?

In a well-planned paragraph (3-5 sentences) explain who you would choose, and why. To prove that you have chosen the right man for an emergency situation, give specific examples, from the stories, of the ability and strength of character of the man you have selected.

Arthur Ashe–
"Mr. Cool" of Tennis

At one time, black athletes did not compete in major tennis tournaments. But that is changed now. In 1957 and again in 1958, Althea Gibson won the women's United States singles championships. She also won the Wimbledon tournament each of those years. Then along came Arthur Ashe. Both he and Althea reached the top.

Arthur's father was the playground superintendent of a park near the Ashe home in Richmond, Virginia. Arthur liked to hit a tennis ball against a practice board in the park. When he was still a little boy, he caught the eye of Ronald Charity. Later, Ronald recalled, "It was difficult to tell whether Arthur was dragging the racket or the racket was dragging Arthur."

Ronald loved tennis and began to teach the youngster the game. Although Arthur was "sixty pounds of bare bone," he soon showed his natural ability. When Arthur first tried to swing a tennis racket, he held it like a baseball bat. He used two hands and imitated the baseball swing. It was all he knew. Then Ronald showed him the difference between tennis and baseball. He taught Arthur where to place his feet when hitting the ball. He explained the different strokes. Under Ronald's watchful eye, Arthur practiced and practiced until he felt at home with the racket.

The other great influence on Arthur's early life was his father. Arthur Ashe, Sr., has a sound philosophy of life. He refuses to get upset over unimportant things. He says, "No one will care a hundred years from now." Arthur, too, began to develop this calm attitude toward life and its problems. This attitude helped him on the tennis courts many times.

Arthur kept improving each year. At college he eventually became number one on the team. In 1963, he became a member of the American Davis Cup team. The Davis Cup was given to tennis by Dwight Davis in 1900. Each year, the nations of the world try to win possession of the cup. It is a symbol of leadership in tennis.

Through the years, America and Australia have dominated the Davis Cup championships. Australia had a long string of victories with only one loss for the years from 1955 through 1962. But 1963 was America's year. The Americans beat the Australians in the final round, 3-2. Arthur Ashe was a member of that team. The next year, Arthur was seeded, or ranked, as the sixth best amateur tennis player in the United States.

The years that followed were times of struggle and triumph. In 1964, Arthur won the Eastern Grass Courts Championship. By then, he was becoming famous. February 4, 1966, was officially proclaimed "Arthur Ashe Day" by the city of Richmond.

Arthur didn't win every tournament he entered. No tennis player wins them all. But Arthur won more than his share. Then in 1968 he reached the very top. In August he won the National Singles Championship at Longwood. In September he won the United States Open Championship, the toughest of them all. In the finals he defeated Tom Okker in an exciting five-set match.

Arthur continued to be a team player, too. He was a member of the 1968 Davis Cup team that brought the cup back to America. Australia had won it from 1964–1967. Arthur's doubles game continued to be excellent, too. In 1970 he and his partner Stan Smith won the Men's Indoor title and the Men's Indoor Open title in doubles.

On May 1973 Arthur played his good friend Stan Smith in the World Championship of Tennis finals. Arthur had just beaten Ken Rosewall, and Stan had just beaten Rod Laver. Arthur and Stan played a great match. Arthur lost, but his good sportsmanship shone throughout the match. Arthur is not only a top player. He is also a fine person.

The influence of Arthur's father continues to help Arthur. He refuses to be like anybody else. He insists on being himself. His tennis style is controlled and cool. He thinks that is best for him.

Some players have the killer instinct. They look upon their opponents as real enemies during the match. They make each match a matter of life and death. They hit and slash at the ball and try to overpower their opponents by their will to win. When they lose, they suffer for a long time. Arthur was once asked if he has the killer instinct.

"Do I have a killer instinct? No. Sorry. I just don't have a killer instinct. I play the game. That's me. I give it all I've got—people are wrong about that—but if it's not enough, I figure they'll just get someone else."

It would be hard to get anyone better than Arthur Ashe.

Theme: Sports **Content Area:** Communication Arts

TOPIC

Skydiving

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

. identify the writer's point of view as expressed in this selection.

Reading/Writing Objectives Students will be able to:

. differentiate between facts and opinions.
. present ideas from the point of view of another person.

MATERIALS

Duplicated copies of "Skydiving--A Free Fall into Space" in The Challenge of Sports.

MOTIVATION

Examine the photograph on page 127. How would these people describe the way they felt at this moment, when the picture was taken?

Discussion and development of sport.

TRANSITION

Today's story is about this unusual activity, which is becoming more popular all the time.

PREPARATION FOR READING

Brainstorming: semantic map of SKYDIVING

Vocabulary Development:

T: Let's go over some of the words from the story before we start to read.

Words to be presented in contextual sentences:

consciousness--note also structural analysis
stability--note also structural analysis
maneuvers

168

DEVELOPMENT:

Teacher reads aloud paragraphs 1-3, pp. 126-127.

T: Could you be one of those people who would be "in no hurry" to release the parachute?

T: Perhaps you'll change your mind as you read the rest of the selection.

As you read, think about the questions below. When you have finished reading, write your answers in your notebooks.

Teacher reminds students that answers are to be written in complete, well-constructed sentences.

T: Try to answer the questions from memory, without looking back.

SUPERVISED SILENT READING

Questions To Be Asked During Reading

1. According to this selection, what happened in 1912?
2. Why was Harold Harris' jump in 1922 so important in the history of this sport?
3. Why is it better not to just tumble around once you have left the plane?

Questions To Be Asked After Reading

1. Students read aloud their answers to questions, and discuss story. When necessary for purposes of clarification or emphasis, students reread appropriate passage(s) to verify their answers.
2. Why were several important things about skydiving learned by accident?
3. How is it possible that a daredevil can wait until the last moment before pulling the rip cord?
   (even at great speeds, the person knows what is happening)

SUMMARY ACTIVITY

T: On a scale of 1 - 10 (1 is safest; 10 most dangerous), how would you rate skydiving? Would you want to try it? Why?

T: How would the author rate it?
(elicit evidence for author's enthusiasm)

T: What special skills must a person have to do well in this sport?

APPLICATION ACTIVITY

Pretend that some of your friends are thinking of starting a skydiving club.

The local airport, from which the planes would take off and to which they would return, does not think it will be popular enough, and they don't want to invest any money in the idea.

Imagine that you are the author of the selection we have just read. How would you answer the airport officials?

Write a well-planned paragraph (3-5 sentences), telling the officials how you feel about the sport, and why they should support the idea of the skydiving club.

Skydiving - A Free Fall into Space

You are in a speeding plane, perhaps a mile above the ground. You step to the door of the plane and look down. At that height people are almost too small to be seen. Cars crawl along the roads like toys. You take a deep breath and step into space. Down you fall . . . and fall . . . and fall!

During the first second you fall about 16 feet, but then you fall faster. After 12 seconds you are falling at a rate of about 174 feet each second. You have already dropped nearly 1500 feet. You are falling very quickly. The ground is getting closer. But you are in no hurry to release your parachute. You spread your arms out and almost seem to fly. But you keep an eye on the ground. At the right time you pull a *rip cord*, and a *parachute* opens to lower you to safety. A parachute is like a large umbrella that slows your fall.

You have just relived the experience of a sky diver. Perhaps you would like to try out this sport for yourself. Or you might be saying to yourself, "You must be crazy! How could anyone enjoy a sport like that?" But people *do* enjoy the sport. There are men and women who have made hundreds of jumps, purely for pleasure.

For a long time, people believed that a falling person would soon lose consciousness, unless he or she had a parachute to slow the fall. People knew that a parachute jump could be made successfully. After all, in 1912, Captain Albert Berry made a parachute jump from an airplane and lived to tell about it. Parachutes became better and better. But no one wanted to try a free fall without a parachute. And no one wanted to see whether a person could remain conscious during a long free fall.

We have learned many things by accident. Skydiving was made possible by an accident. In 1922, Harold Harris jumped from 2500 feet and failed to find his rip cord. Down he fell, toward sure death. At 500 feet, he had only a few seconds left. He somehow found his rip cord and opened the parachute. He was barely in time. But his experience proved one thing. A person does not lose consciousness during the free fall. Even at great speeds, the person knows what is happening.

Then other persons got an idea. "Let's wait a little longer before pulling the rip cord." They tried waiting an extra second, then a few extra seconds. Soon these daredevils were waiting until the last moment. Skydiving was born.

How close can a parachutist come to landing on a target on the ground? Some people wanted to know. So, different events were set up, starting from different heights. Some events were even held at night! The first college championships were held in 1962. There have been many matches between teams from different countries.

During free fall, skydivers don't just tumble any which way. They know that body position sets the speed of the fall. By falling flat, with legs and arms stretched out, they will reach a top speed of about 120 miles an hour. Falling straight up and down, they will go a lot faster. They may reach a maximum speed of 180 miles an hour. Higher up in the sky, where the air is thinner, speeds may be even greater.

There are many maneuvers in skydiving. The *arch* position is the most important to learn. The body is parallel to the ground. This position is the safest. It offers great stability. The diver can keep his eye on the ground. He can easily pull the rip cord.

There are other positions, too. In some falls, the skydivers move around. They may turn, twist, and roll. They may pass a stick from one to another. In competition, a four-person team jumps from about 12,500 feet and passes a stick four or five times. The divers open their parachutes at about 2500 feet. At this point they have reached speeds up to 180 miles an hour.

Thrilling? It certainly is. Dangerous? Yes. But skydivers say that the danger is less than it seems. The risk of being hurt is about 80 times as much as taking part in a football game. There have been many deaths, too. A death occurs once in 17,000 jumps. Still, skydivers say that the joys of skydiving outweigh the dangers.

For the skydiver, the first jump is the "moment of truth." When she or he steps out of that speeding plane and heads toward the ground, there's no turning back. Would you like to try skydiving?

Section 5

Supporting Basic Skills in the Content Areas

While the teaching of reading and writing skills is the specialty of the communication arts teacher, teachers in other content areas which depend extensively on conveying information through printed materials may find it helpful to adopt supportive techniques which will aid PREP students in achieving the basic objectives of the ninth grade curriculum. This section explains such supportive approaches for social studies, science, and mathematics.

HS
PREP

A. The PREP Student and Social Studies

As a social studies teacher in the high school PREP Program, you have the challenge of teaching the minimum learning essentials of your discipline and, simultaneously, helping your students to improve their basic skills by planning in four ways. PREP students are in the program because they lack the reading and writing skills of many of their peers. You can teach help these students in four ways:

1. Give reading assignments your students can do successfully.
2. Guide students in using the specific skills which are most needed in a particular lesson.
3. Teach content through watching, listening or discussion as well as appropriate reading assignments.
4. Introduce lessons with motivating activities that relate to what students already know.

Giving Reading Assignments that Succeed

PREP readers often have a great deal of difficulty learning new social studies content just by reading about it. But to develop reading and writing skills, students must have practice and instruction in reading social studies. The solution lies in giving students short, easy-to-read selections and preparing them thoroughly for the assignments. This preparation should be an integral part of your social studies lesson plan.

To help students make connections between what they already know and the reading assignment, your motivation should use ideas drawn directly from students' own lives. For example, in preparing students to read quotations from the writings of Renaissance humanists, you might first ask students to brainstorm a list of the main themes depicted on television today (love, violence, desire for money, etc.). Students can then read the quotations to see which modern themes appear in the writings of the humanists and which don't.

PREP students should be prepared for the assignment before they even begin reading. They need to be taught important vocabulary. They need your help setting purposes for reading. They need guidance in coping with the different kinds of materials used in the social studies (expository textbook readings, letters, plays, maps, pictures, etc.). You can help by building into your social studies lesson plan preparation for the reading assignment. The following ideas can help you accomplish this.

1. Teach or review difficult words or concepts before students read. (TIP: Select about five to eight words from the reading assignment. Focus especially on abstract concepts, new terminology, and words that look difficult or are hard to pronounce):

   - Introduce the words in sentences (contexts) that clarify their meanings, Example:

     > Ideas may spread by means of cultural diffusion. This means that people in one civilization "borrow" an idea from another civilization and then use the idea in a new way. For example, the wheel may have been first seen used on a cart, but the idea of the wheel might have been taken over by another group of people and used also as a potter's wheel.

     Learning word meanings from context is an important reading skill. Point out that underlining, italics, and boldface type are often used to alert readers to the presence of context clues. (TIP: If a new word is not presented in a useful context in the reading, write your own sentence to use at this point in the lesson.)

   - Make abstract terms more concrete by using drawings, artifacts, demonstrations, roleplaying etc. PREP readers may fail to understand an entire reading because they have missed an important word or concept. Example: Use pictures (or even models) to illustrate the machines of the early industrial revolution.

   - Many familiar words have specialized meanings in social studies. PREP readers may fail to realize that the familiar meaning does not apply in the context of a social studies reading. Alert students to such words (diet, for example) and discuss the familiar and the specialized definitions. (TIP: Present the words in the context of one or more sentences and give students two or more choices of meanings, one the familiar definition and one the "social studies" definition. To build reading skills, ask students to hunt for other examples of familiar words that change their meanings in social studies.)

   - For familiar, but difficult, terms such as alphabet or democracy, do a brainstorming activity with students and clarify any misunderstandings they may have.

   - There are many words in social studies, often foreign in origin, which are difficult to pronounce, proletariat, for example. Students may fail to realize that a word they have heard in class is the same word they are seeing in print, unless they get a chance to see and hear the word simultaneously. By writing such words on the board and having students pronounce them, you can help students match up what they hear with what they see.

2. Give students an overview of the content they will be reading and help them set a purpose for the reading.

   - Students may have trouble "psyching out" what you want them to get from an assignment. To help students focus their attention on what you think is important, give students questions to answer before you give them the assignment. (TIP: Limit the number of prereading questions you ask and pick questions that will help you get a good discussion going later.)

   - PREP students will gradually learn to be more independent if you can show them how to set their own purposes for reading. Examples: Tell students a summary of the material and ask them to brainstorm the questions that they should try to answer. After they make the suggestions, you can react by saying "That's a good question because the reading is about traditions in three religions and it will be important to find the similarities among them" or "The reading is about the Princess Dowager's reign, so we are probably not going to learn about her life as a young girl." Before students begin reading, you or they may want to select three to five questions to answer.

   - Difficult or archaic language may discourage a PREP reader from even beginning the assignment. To help students over this hurdle, you can have students read to match up the excerpts in the reading with modern-day paraphrases that you prepare. (TIP: Have better readers write the paraphrases.)

   - Good readers use what they have just read to help them get ready for what is coming next. To model this process, read (or have students read) the opening paragraph or two of a selection. Then ask students to predict what will come next. Have students then read the next paragraphs to see whether they have been good guessers. Continue for part or all of the selection.

   - To help PREP students cope with a reading selection that is too long, assign only the most important paragraphs or assign students to each read only part of the selection; then have students share their parts with each other. (TIP: Have students work in small groups to pool what they have read and write a summary of the whole reading. Groups can then compare their summaries with a model summary you have prepared. After students have had practice doing this, they can trade and critique each other's summaries.)

   - To help students develop outlining and notetaking skills, give students an incomplete outline and have them fill in the missing information. For variety, give students an outline that has irrelevant information and have them read to eliminate the information that does not belong. (TIP: Begin by making the task very specific, for example, by specifying the number of details they are to fill in (delete) or providing choices. Gradually help students to be more independent by leaving more of the decision-making to them.)

- Students with comprehension problems may draw conclusions that are not based on the information in the reading selection. To help students, give them a series of statements and ask them to decide which are ones that the author might have meant. Have students go back to the selection to justify their decisions.

- To help PREP students read for different purposes, have them read an important selection several times, each time looking for different information. Discuss with students the fact that they may want to read differently each time they go through the selection, for example, quickly just to find out what the selection is about, skimming to find definitions for keywords, slowly and carefully to formulate a main idea.

Questioning

Questioning is an excellent opportunity to model for students how successful readers think about the reading they have done. As students respond to your questions, probe to have them explain how they arrived at the answers and praise students for successful reasoning. When students answer incorrectly, probing will help you and the student to identify the problem.

Reading Skills in Social Studies

1. Students may not vary their reading techniques to fit different kinds of materials. The global history curriculum, which presents students with many different kinds of reading, provides an excellent opportunity for teaching students to develop more flexibility in their reading strategies. For example:

   - Newspapers: Main ideas usually appear in the first few paragraphs. The remainder of an article usually provides more details. (A more detailed discussion of teaching with the newspaper is given on page 00.)

   - Descriptions: Descriptions of life in other times and places are full of details that paint pictures. Suggest to students that they read to draw a mental picture.

   - Maps, graphs, tables: These condense a great deal of data and require interpretation of specialized symbols. Maps, graphs, and tables need to be read slowly and carefully. Many students may find it helpful to "translate" the graphic information into their own words.

   - Quotations: These are often difficult or contain archaic language. The reader will need to paraphrase the ideas. When there are several quotations, students will need to look for the similarities and differences among them.

2. Identify one to three important reading skills as they relate to your lesson and build in activities to help students develop and practice those skills. For example:

   - Main idea: A main idea summarizes the topic of a reading selection and what the author has to say about the topic. A main idea may be a title, headline, sentence, or even paragraph. To gain skill in identifying the main idea, have students, for example, select the best of several titles, write "telegrams" summarizing a reading, complete incomplete outlines from which one or more main ideas have been omitted, read different selections and share the main ideas. (TIP: Early in the term, give the students choices to select from in forming the main idea and then gradually give them more responsibility to generate the main idea on their own.)

   - Cause/Effect: Teach students to be alert to words such as because, so, therefore, one cause was that alert the reader to cause/effect writing. Have students practice associating causes and effects by matching causes and effects and discussing the evidence in the selection that suggests a cause/effect relationship. Give students a cause and have them find the effects or vice versa. Give students a cause and a list of effects, and have students eliminate the effects that are not related to the cause. Give students a list of causes and effects and have them see how many of the effects are related to each cause and how many causes are related to each effect

   - Comparison/Contrast: Teach students to be alert to words such as in contrast, in comparison, similarly, in the same way that signal comparison/contrast writing. To practice identifying comparisons and contrasts, have students complete charts that list the ideas and characteristics to be compared or contrasted. (TIP: As students gain skill in comparison/contrast, ask them to identify the ideas and characteristics for the chart. The chart can be used as an outline for writing a comparison/contrast paragraph or short essay.)

   - Sequence: Sequence may be signaled by words such as first and second or by dates. To practice sequencing, give students a list of events to put in correct sequential order or have students complete a timeline.

   TIP: Have students guess the correct answers before they read and then read to check and correct their responses. You can also have students create similar exercises to trade with each other. In going over these exercises, have students explain how they got answers and how they can justify their choices. Try to identify not only what students get wrong, but why they are getting the wrong answers.

Writing Activities in Social Studies

Writing in social studies helps students clarify their ideas and gives them practice with writing skills. These are some of the activities that can be built into the social studies lesson plan. A general discussion of writing in the content areas can be found in Section I.

- Right before a discussion have students brainstorm possible answers to the questions. This also can make the discussion go more smoothly.

- When students work in small groups, have individuals take turns serving as group secretary.

- Have students keep a part of their notebook in which they write reactions, feelings, and ideas about social studies content.

- Have students write in a variety of formats: fill in the blanks, writing in full sentences and paragraphs, writing in phrases for their own use (such as class notes), writing with correct spelling and punctuation for others to read what they have written.

- Have students take notes in class and discuss notetaking skills with them. (TIP: Begin by having students complete a set of incomplete notes; gradually give them more responsibility for notetaking.)

- Have students write in a variety of styles: notes, friendly letters, business letters, persuasive essays, etc.

- Encourage creative writing. Examples: Have students plan, write, and illustrate short myths. Have students write "postcards" home while they're on a trip to ancient Rome. Have students write an ad or commercial for medieval armor.

In General...

1. Have students paraphrase directions for assignments before they begin reading or writing.

2. Begin all reading and writing assignments in class.

3. Identify, or have students identify, a clear reason for reading before beginning the assignment.

4. Introduce new material by beginning with students' own experiences. Bring the lesson full circle by coming back to the motivation that began the lesson or by asking students to apply new concepts or information to their own lives.

5. Especially early in the term, give students choices to react to rather than open-ended questions to answer. For example, have students pick the best of four possible topics for a selection, have students complete an incomplete outline, give students a list of possible inferences for a selection. As the term progresses, wean students gradually from this support so they begin generating their answers.

6. Talk about reading and writing strategies with students.

7. Help students distinguish between reading for pleasure (your own purposes and no demand that you remember) versus studying (reading to understand what the teacher thinks is important and a demand to remember). If you feel comfortable, discuss your own tricks for coping with study reading (e.g., giving yourself a reward).

8. Allow students to look back at the selection to find answers and to explain their thinking processes.

Model Lesson

In the lesson below handwritten notes hightlight examples of how reading and writing skills are an integral part of the lesson.

TOPIC

Modern weapons or disarmament! Which represents a better way to guarantee a country's peace and safety?

PERFORMANCE OBJECTIVES

Content Area Objectives Students will be able to:

- trace the development of weapons from wood and stone to bronze and iron
- list the different types of weapons developed and used in each of the three periods of Egyptian civilization
- describe the impact of new weapons and materials on Egyptian history
- explain the role played by cultural diffusion in the history of weapons development.
- Evaluate modernization of weapons as the way to maintain peace

Reading/Writing Objectives Students will be able to:

These skills are needed to learn and reinforce the social studies objectives

- find the main idea of the reading selection (students pick the best title for a selection about weapons.
- identify important details in the reading selection
- determine the sequence of events in the reading selection (sequence is an important skill in social studies)
- compare and contrast information
- make conclusions based on information in the selection.
- read for cause and effect - This selection states or implies a number of important cause and effect relationships

MATERIALS

reading selection (the selection has been simplified and shortened for PREP students.)

MOTIVATION

The term "modern weapons" is introduced and its meaning explained. Students understanding is assisted as they supply examples.

Write the term "modern weapons" on the board. Review its meaning with students. Then in their notebooks ask students to jot down as many examples of modern weapons as they can think of in five minutes. Elicit examples and list them on the board. Point out that as a nation, we need to decide how much to spend on weapons and which weapons to build.

The jotting technique gives students time to think of examples, [illegible] and it contributes to class discussion.

These questions relate to a topic from history to a modern-day problem

Review with students our President's views on spending for the national defense. upon his election, President Reagan promised the American people to update the weapons of our armed forces. Only a strong America, he argued, is a safe America, able to play its role in securing world peace. Ask the class, "Is it important for the United States to have modern weapons?" "Will modern weapons make America strong?" "How is a strong American supposed to keep the peace?" "If we update our weapons, how do you think the Russians will react?" "Is it better to keep modernizing our weapons or to try to reach an agreement with the Russians that both countries will stop updating their weapons?

Preview Content for students.

After a brief discussion, tell the class that they will now read a selection about the weapons of ancient Egypt and those of its enemies. Ask, "What questions can we ask about these weapons?"

Possible student questions?

Helps students develop ability to self-question as they read.

. What kinds of weapons did the Egyptians have?
. How were they made?
. What kinds of weapons did Egypt's enemies have?
. Was a weapons agreement between Egypt and its enemies possible?
. Did the Egyptians' weapons give them peace and safety?

Help students raise the above questions if they do not do so themselves. If students have difficuluty, ask them for how, when, where, why questions.

PREP FOR READING

. Students have been prepared for the reading by the motivational strategy which has focused their attention on a series of questions developed with the teacher.
. Additional preparation could be achieved by exhibiting a bulletin board display of ancient weapons (see illustrations of scimitar and battle-ax which follow). Have students identify each weapon (battle ax, lance, chariot) and compile a vocabulary list of ancient weapons of war.
. Prepare students for some of the more difficult vocabulary in the reading by having them define from context the underlined words in the sentences below:

These are teacher-prepared sentences designed to provide clues to the meaning of the underlined words. Show students that the terms because and since help us figure out how the rest of the sentence relates to the unknown word.

- Because the girl's school work was very advanced, she was promoted to the next grade.
- John, carrying a compass, a canteen and a pocket knife, was well-equipped for a walk in the woods.
- Since Private Jones worked at headquarters during the war, he never saw combat.

SUPERVISED SILENT READING

Questions to be Asked After Reading

. Describe to the class how they can determine the best title for the reading selection. A good title like a piece of clothing fits the subject. A poor title may be too big and hang loosely on the body, or it may be too small and not cover the subject. Ask the class to find the best fit from among the following choices:
- Weapons of the Ancient World
- Weapons of Ancient Egypt and Her Enemies
- Weapons of Ancient Egypt

Choices help students. It is easier to pick the best choice than to dream up a main idea.

. Discuss why the second choice is the best for this article.
. Have students use a time line to locate specific information and place it in proper sequence. Draw the following time line on the chalkboard:

(The time line gives students a framework for organizing the details in the selection.)

WEAPONS OF WAR IN ANCIENT EGYPT

SCIMITAR

BATTLE-AX

OLD KINGDOM	MIDDLE KINGDOM	NEW KINGDOM

2700 B.C. 2200 B.C. 1800 B.C. 1085 B.C

1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.

The first question helps students summarize the development of weapons implicit in the chart. The second asks students to relate the information to a larger concept. The third asks students to read between the lines, drawing on their own information to reach a conclusion.

Get three students to come to the chalkboard and fill in the list of weapons used in each time period. Ask the members of the class to critique the work of the three volunteers.

. What story does this passage tell about the development of weapons?

. We have been talking about the idea of cultural diffusion (the exchange of ideas and products between societies) since the beginning of our term's work. What part did cultural diffusion play in the history of the weapons of ancient Egypt and its enemies? Give examples.

. Can you solve a mystery? The Egyptians had the same types of weapons used by the Hittites, their conquerors. So why were the Hittites able to defeat the Egyptians so easily?

What arguments could you have made to the Egyptians to convince them that they would be better off agreeing with their enemies to disarm than in trying to find new weapons? How successful do you think you would have been in convincing them?

. Based on this reading, would you conclude that updating (modernizing) weapons would be the best way for the Egyptians to guarantee peace and safety? Why or why not? Or is it better for enemy countries to agree together to stop modernizing their weapons? Would the Hyksos and the Hittites have agreed with Egypt to stop development of more modern, better weapons? Why? Why not? Why do many modern groups beleive that agreeing to disarm is the best way to guarantee a nation's peace and safety?

(Students should appreciate that Egypt's enemies had little incentive to curb their weapons development since they had a superior technology which Egypt did not have.)

. Today, which is better:

- for the U.S. to keep updating its weapons or to try to reach an agreement with the Russians that both countries will stop updating their weapons?

. Does the fact that the U.S. and Russia can match each other's weapons, while Egypt could not match its enemies' weapons, make an agreement between them today more likely?

(Students should realize that unlike Egypt and its enemies both the U.S. and Soviet Union have the technology to match each other's arsenals - a factor which mades continuous weapons modernization today debatable.)

SUMMARY ACTIVITY

By giving students the causes, they are more likely to be able to find the effects.

Have students complete a cause/effect exercise which summarizes the lesson. Tell them to review the reading selection and then complete the statements below. Remind them that the cause tells why something happens, and the effect tells the result, or what happens.

- Egyptians of the Old Kingdom were not very advanced in warfare because ____________________
- At the end of the Middle Kingdom, the Hyksos easily conquered the Egyptians because ____________________
- During the New Kingdom, the Egyptians were able to defeat the Hyksos and other people because ____________________
- Toward the end of the New Kingdom, the Egyptians were again conquered because ____________________

This activity helps to reinforce the meaning of cause and effect.

Now have students underline each cause and circle the effect for each cause.

APPLICATION ACTIVITY

This activity relates the lesson back to the original motivation as well as allows students to practice writing a persuasive essay in the style of a letter to a public official.

Have students write a letter to the President in support of or in opposition to his policy to update or modernize American weapons. (Before having them engage in this activity, be sure that students can give arguments supporting both sides of this issue.)

Notice that the lesson focused on a limited number of key concepts. Although the reading was not long, the teacher was able to "mine" it for a number of activities that encourage students to read for relationships rather than isolated details. Writing has been used to record ideas for oneself and for others.

Worksheet

Title: "________________________"

During the period of the old Kingdom (2700-2200 B.C.) the Egyptians were not very advanced in the arts of warfare. Their main weapons consisted of battle axes, lances, bows and arrows, and wooden clubs used to throw at the enemy (throwsticks).

Although their weapons improved by the period of the Middle Kingdom (2200-1800), the Egyptian army was not well-equipped for warfare. They fought almost nude, carrying with them heavy, oversized shields made of stretched skin over a wooden frame. At this time, solders depended upon spears and broad daggers in combat.

At the end of the Middle Kingdom, Egypt was invaded by a war-like people from western Asia called the Hyksos. The Hyksos easily conquered the Egyptians using horse-drawn chariots and weapons made of bronze which were superior to the earlier weapons made of copper. They also used weapons that had been developed in Asia, such as the scimitar, body armor, and powerful bows made of wood and horn.

After being ruled by the Hyksos for 100 years, the Egyptians adopted the weapons of their conquerors and were able to defeat the Hyksos and drive them out. During the New Kingdom (1570-1085) the Egyptians used these new weapons to conquer an empire that included Palestine, Phoenicia, and Syria, up to the Euphrates River.

Finally, toward the end of the New Kingdom period (about 1090 B.C.) the Egyptians were conquered and never regained their independence. A people called the hittites, using weapons made of iron, easily defeated the Egyptians armies.

B. The PREP Student and Science

PREP readers often have a great deal of difficulty learning new science content just by reading about it. But to develop reading and writing skills, students must have practice and instruction in reading and writing about science. The solution lies in giving students short, easy-to-read selections and preparing them thoroughly for the assignments. This preparation should be an integral part of your science lesson plan.

As a science teacher in the high school PREP Program, you have the challenge of teaching the minimum learning essentials of your discipline and, simultaneously, helping your students to improve their basic skills. You can help these students by planning in four ways:

1. Give reading assignments your students can do successfully.
2. Guide students in using the specific skills which are most needed in a particular lesson.
3. Teach content through watching, listening or discussion as well as appropriate reading assignments.
4. Introduce lessons with motivating activities that relate to what students already know.

Giving Reading Assignments That Succeed

To help students make connections between what they already know and the reading assignment, your motivation should use ideas drawn directly from students' own lives. For example, in preparing students to read a newspaper article on energy conservation, you can ask students what happens to apartment rents when the price of energy goes up or when energy is wasted, when, for example, the landlord doesn't provide storm windows in winter.

PREP students should be prepared for an assignment before they even begin reading. They need to be taught important vocabulary. They need your help in setting purposes for reading. They need guidance in coping with the different kinds of materials used in the general science (expository textbook readings; laboratory worksheets; newspaper and magazine articles; charts, tables, diagrams, and pictures, etc.). You can help by building into your science lesson plan preparation for the reading assignment. The following ideas can help you accomplish this.

1. Teach or review difficult words or concepts before students read. (TIP: Select about five to eight words from the reading assignment. Focus especially on abstract concepts, new terminology, and words that look difficult or are hard to pronounce):

   - Introduce the words in sentences (contexts) that clarify their meanings, for example:

     A convex lens is thinner at its edges than it is in its middle;

Learning word meanings from context is an important reading skill. Point out that italics, underlining and boldface type may be used to alert readers to the presence of context clues. (TIP: If a new word is not presented in a useful context in the reading, write your own sentence to use at this point in the lesson.)

- Make abstract terms more concrete by using experiments, demonstrations, etc., before students read. PREP readers may fail to understand an entire reading because they have missed an important word or concept.

- Many familiar words have specialized meanings in science. PREP readers may fail to realize that the familiar meaning does not apply in the context of a science reading. Alert students to such words (matter or cell, for example) and discuss the familiar and the specialized definitions. You can use a science dictionary or glossary to obtain reliable definitions of science terms. (TIP: Present the words in the context of one or more sentences and give students two or more choices of meanings, one the familiar definition and one the "science" definition. To build reading skills, ask students to hunt for other examples of familiar words that change their meanings in science.)

- For familiar but difficult terms, such as light or heat, do a brainstorming activity with students and clarify any misunderstandings they may have.

- There are many words in science which are difficult to pronounce, such as meniscus (men-NIS-kuhs). Students may fail to realize that a word they have heard in class is the same word they are seeing in print, unless they get a chance to see and hear the word simultaneously. By writing such words on the board and having students pronounce them, you can help students match up what they hear with what they see.

- Many scientic terms are based on Latin or Greek and have word parts with useful meanings. As appropriate words come up in the curriculum, teach prefixes such as trans-, con-, in- and meso- and combining forms such as duct, vecto, meter, calori. Have students look for words with the same word parts (for example, thermometer, calorimeter, speedometer) as well as words that share combining forms but have prefixes that change meaning (for example, hypoactive and hyperactive; ingest and digest).

2. Give students an overview of the content they will be reading about and help them set a purpose for the reading.

    - Students may have trouble "psyching out" what you want them to get from an assignment. To help students focus their attention on what you think is important, give students questions to answer before you give them the assignment. (TIP: Limit the number of prereading questions you ask and pick questions that will help you get a good discussion going later.)

- PREP students will gradually learn to be more independent if you can show them how to set their own purposes for reading. Examples: Tell students a summary of the material and ask them to brainstorm the questions that they should try to answer. After they make the suggestions, you can react by saying "That's a good question because the reading is about energy conservation and it will be important to find out what the author's opinion is" or "The reading is about the structure of the eye, so we are probably not going to learn about the reasons for differences in eye color." Before students begin reading, you or they may want to select three to five questions to answer.

- Difficult "scientific" language may discourage a PREP reader from even beginning the assignment. To help students over this hurdle, you can have students read to match up the excerpts in the reading with paraphrases that you prepare. (TIP: Have better readers write the paraphrases.)

- Good readers are constantly using what they have just read to help them get ready for what is coming next. To model this process, read (or have students read) the opening paragraph or two of a selection. Then ask students to predict what will come next. Have students then read the next paragraphs to see whether they have been good guessers. Continue for part or all of the selection.

- To help PREP students cope with a reading selection that is too long, assign only the most important paragraphs or assign students to each read only part of the selection; then have students share their parts with each other. (TIP: Have students work in small groups to pool what they have read and write a summary of the whole reading. Groups can then compare their summaries with a model summary you have prepared. After students have had practice doing this, they can trade and critique each other's summaries.)

- To help students develop outlining and notetaking skills, give students an incomplete outline and have them fill in the missing information. For variety, give students an outline that has irrelevant information and have them read to eliminate the information that does not belong. (TIP: Begin by making the task very specific, for example, by specifying the number of details they are to fill in (delete) or providing choices. Gradually help students to be more independent by leaving more of the decision-making to them.)

- Students with comprehension problems may draw conclusions that are not based on the information in the reading selection. To help students, give them a series of statements and ask them to decide which are ones that the author might have meant. Have students go back to the selection to justify their decisions.

- To help PREP students read for different purposes, have them read an important selection several times, each time looking for different kinds of information. Discuss with students the fact that they may want to read differently each time they go through the selection, for example, quickly just to find out what the selection is about, skimming to find definitions for keywords, slowly and carefully to find evidence that relates to a hypothesis.

Questioning

Questions provide an excellent opportunity to model for students how successful readers think about the reading they have done. As students respond to your questions, probe to have them explain how they arrived at the answers and praise students for successful reasoning. When students answer incorrectly, probing will help you and the student to identify the problem.

Reading Skills in General Science

1. Students may not vary their reading techniques to fit different kinds of materials. The general science curriculum, which presents students with different kinds of reading, provides an excellent opportunity for teaching students to develop more flexibility in their reading strategies. For example:

   - Laboratory worksheets: These have a predictable organization and need to be read slowly and carefully. When reading directions students should pay special attention to key terms such as study, describe, and choose; imagine the sequence of tasks in their minds, and collect materials before they begin to work. (TIP: Review directions by asking students to paraphrase them, resequence a jumbled list of steps, rewrite or restate directions in their own words, or explain why certain steps must be done in a specific order.)

   - Maps, graphs, tables, diagrams, and pictures: These condense a great deal of data and require interpretation of specialized symbols. They should be read slowly and carefully. Students may find it helpful to "translate" the graphic information into their own words.

   - Newspapers: Main ideas usually appear in the first few paragraphs. The remainder of an article usually provides more details. (A detailed discussion of teaching a newspaper article can be found in the Communication Arts Section.)

   - Descriptions: Descriptions include of details that paint pictures. Suggest to students that they read to draw a mental picture.

2. Identify the two or three important reading skills most relevant to your lesson and build in activities to help students develop and practice those skills. For example:

- Main idea: A main idea summarizes the topic of a reading selection and what the author has to say about the topic. A main idea may be a title, headline, sentence, or even paragraph. To gain skill in identifying the main idea, have students, for example, select the best of several titles, write "telegrams" summarizing a reading, complete incomplete outlines from which one or more main ideas have been omitted, read different selections and share the main ideas. (TIP: Early in the term, give the students choices to select from in forming the main idea and then gradually give them more responsibility to generate the main idea on their own.)

- Cause/Effect: Teach students to be alert to words such as because, so, therefore, one cause was that alert the reader to cause/effect writing. Have students practice associating causes and effects by matching causes and effects and discussing the evidence in the selection that suggests a cause/effect relationship. Give students a cause and have them find the effects or vice versa. Give students a cause and a list of effects, and have students eliminate the effects that are not related to the cause. Give students a list of causes and effects and have them see how many of the effects are related to each cause and how many causes are related to each effect.

- Comparison/Contrast: Teach students to be alert to words such as in contrast, in comparison, similarly, in the same way that signal comparison/contrast writing. To practice identifying comparisons and contrasts, have students complete charts for comparison and contrast.

- Sequence: Sequence may be signaled by words such as first and second or numbered lists. To practice sequencing give students a list of events to put in correct sequential order.

- Study skills: Have students use textbook aids such as the table of contents, index, and glossary; organize their science notebooks; seek out additional information in other textbooks and resource materials such as the encyclopedia.

- Critical reading: Have students read articles, advertisements, etc., to determine whether the author has taken an unbiased stand or is presenting a one-sided point of view intended to persuade the reader. Students can seek evidence of propaganda techniques in textbooks, literature from various science organizations, and advertising, for example.

TIP: Have students guess the correct answers to an activity before they read and then read to check and correct their responses. You can also have students create exercises to trade with each other. In going over these exercises, have students explain how they got answers and how they can justify their choices. Try to identify not only what students get wrong, but why they are getting the wrong answers.

Writing Activities in General Science

Writing in science helps students clarify their ideas and gives them practice with writing skills. These are some of the activities that can be built into the science lesson plan. A general discussion of writing in the content areas can be found in Section I.

- Right before a discussion have students brainstorm possible answers to the questions. This also can make a discussion better.

- When students work in small groups, have individuals take turns serving as group secretary.

- Have students keep a part of their notebook in which they write reactions, feelings, and ideas about science content.

- Have students write in a variety of formats: fill in the blanks, writing in full sentences and paragraphs, writing in phrases for their own use (such as class notes), writing with correct spelling and punctuation for others to read what they have written.

- Have students take notes in class and discuss notetaking skills with them (TIP: Begin by having students complete a set of incomplete notes; gradually give them more responsibility for notetaking.)

- Have students write in a variety of styles: notes, friendly letters, business letters, persuasive essays, etc.

- Encourage creative writing.

In General...

1. Have students paraphrase directions for assignments before they begin reading or writing.

2. Begin all reading and writing assignments in class.

3. Identify or have students identify a clear reason for reading before beginning the assignment.

4. Introduce new material by beginning with students' own experiences. Bring the lesson full circle by coming back to the motivation that began the lesson or by asking students to apply new concepts or information to their own lives.

5. Especially early in the term, give students choices to react to rather than open-ended questions to answer to. For example, have students pick the best of four possible topics for a selection, have students complete an incomplete outline, give students a list of possible inferences for a selection. As the term progresses, wean students gradually from this support so they begin generating their answers.

6. Talk about reading and writing strategies with students.

7. Help students distinguish between reading for pleasure (your own purposes and no demand that you remember) versus studying (reading to understand what the teacher thinks is important and a demand to remember). If you feel comfortable, discuss your own tricks for coping with study reading (e.g., giving yourself a reward).

8. Allow students to look back at the selection to find answers and to explain their thinking processes.

Model Lesson

In the lesson below handwritten notes hightlight examples of how reading and writing skills are an integral part of the lesson.

TOPIC

Protection from lightning. (Lesson focuses on a single topic.)

PERFORMANCE OBJECTIVES

Content Area Objectives

. describe procedures for protecting themselves from lighting.
. infer reasons for following recommended safety precautions.
. predict activities, locations, and objects which offer the most risk of lighting striking.

Reading/Writing Objectives

. identify important details.
. select appropriate information to summarize a main idea.
. rewrite information for a new audience.

objectives emphasize summarizing and using the safety information in the articles.

MATERIALS

Wimshurst machine (for demonstrating electrical discharge), reading selections A and B, (optional: lightning rod or lightning arrester for an antenna).

MOTIVATION

Lesson begins with a concrete experience.

Demonstrate the operation of the Wimshurst machine with the help of a student volunteer, and have students observe the electrical spark arcing between the electrodes. Elicit from students that the spark reminds them of lighting and the sparking sound reminds them of thunder.

PREPARATION FOR READING SELECTION A

More concrete experiences.

. Ask students to relate stories that illustrate life-threatening experiences with lightning. These may be based on personal experience, stories students have heard, or articles they have read. List brief summaries of the stories on the board, asking students to help you think of a few key words to describe each incident. (Teacher writes students ideas for use later. Models good notetaking.)

students infer causes

. Have students analyze each anecdote to determine what contributed to the danger for the people involved (for example, standing under a solitary tall tree, holding a fishing rod or golf club).

Students draw on their own knowledge before reading.

. Based on their analysis, ask what safety rules students would expect lightning experts to offer to protect the general public from danger. Write these on the board for use later in the lesson.

. Before handing out selection A, write the following sentences on the board. Ask students to use the context of each sentence to figure out what the underlined words mean.

Students practice using context to learn vocabulary they need for reading.

- The solitary man was all alone on the street.
- She felt safer because she had the new locks and the window gates for protection.
- Their new store was named "Metallic Dreams" and sold things made of gold, silver, and other metals.
- There are many kinds of electrical equipment, such as toasters, televisions, and lamps.

Teacher anticipates possible confusions

Then write the words "lightning" and "lighting" on the board. Have students pronounce both words and explain how they differ in spelling and meaning.

Notice selection is short and easy.

. Hand out selection A. Have students find and underline the words they defined. Then have students read the selection to see how their recommendations compare with those of the author. - students read for a specific purpose.

reinforces vocabulary instruction

SUPERVISED SILENT READING

Questions To Be Asked after Reading Selection A

Students use information and correct any errors in original list.

. Have students revise their list of safety rules to reflect the new information they've learned, and ask the following questions:
- Based on what you know about lightning, explain the reasons for each of the safety rules (for example, lightning tends to strike tall objects and metallic objects).
- If you take shelter in your car, why is it important that you do not touch anything metal?

"Thinking" questions about cause and effect.

Practice in main idea (useful later in notetaking and outlining.)

. Write the following titles on the board and ask which would be best for the article because it tells the reader the most about the contents of the article:
- Why Lightning Strikes
- How to Protect Yourself from Lightning
- Trees and Lightning

Teacher thinking process for finding main idea.

Point out that all three titles contain the word lightning, but that the first title is wrong because the article doesn't tell about the causes of lightning and the last title isn't very good because it describes only one part of the article. Have students suggest other titles that would also be appropriate, for example a title that would catch someone's attention better than this one does. (Introduce idea that good writing varies with different audiences.)

PREPARATION FOR READING SELECTION B

. Explain that some situations put us in more danger from lightning than others and some people therefore run more risk of being hit. Introduce the following new terms and have students define them from context:

More vocabulary instruction

The victim of the car accident was badly hurt. They looked for a safe refuge to get out of the storm.

Sets purpose for reading.

. Hand out selection B and ask students to find out which people are most at risk of becoming victims of lightning. (Short selection.)

Questions To Be Asked after Reading Selection B

Critical reading

- Who does the author think is at most risk? What reasons does the author give or can you guess at?
- Do you agree that males are more likely to be victims of lightning than females? Why?

applying the ideas in the selection

- What places and activities put you at most risk? Why?
- What occupations are likely to put people at risk? (For example, telephone installer, lifeguard, construction worker). Why?

SUMMARY ACTIVITY

Ask students to recap the safety precautions in their own words. - Checking/re-inforcing literal understanding.

APPLICATION ACTIVITY

Critical thinking

. Imagine you are a member of a commission responsible for advising industry about product safety. What products would you recommend carry warnings about lightning because someone who uses or installs them might be at risk? (For example, sports equipment, antennas). Ask students to select products and write warnings for them. Have students share the warnings and discuss which would be most effective. -(analysis of effective writing.)

Allows students to use knowledge and gear product to a specific audience. A sense of audience is an important writing skill

. Have students create posters listing safety precautions in their own words. Students should select a place (such as a bathhouse or park entrance) where their poster might go, planning the language and layout of the poster to attract attention.

Student Worksheet

Selection A

Title: ______________________

Thunderstorms can be one of nature's most awesome phenomena, but their power does not have to terrify you. You can watch and listen in perfect safety if you observe a few precautions.

If Outdoors:

1. Lightning can strike well ahead of or behind a thunderstorm, so protect yourself even if the storm seems far away.
2. If you can, seek shelter in a building. If not, try to get into a ditch or canyon. In a forest, clumps of low trees or bushes can offer you some protection, too. If you're in the open, away from shelter, avoid the highest object in the area. *Don't stand under a solitary tree.* Keep at least twice as far away from any isolated tree as the tree is high.
3. If possible, get into a closed automobile.
4. Keep away from metallic objects, such as tractors and other farm equipment, as well as wire fences.
5. If your hair stands on end, your skin tingles, or (at night) a bluish glow appears on metal objects, lightning may be about to strike. Drop to your hands and knees immediately, and rest your head on your knees.

If Indoors:

1. Stay away from outside doors and windows. Avoid metal objects like stoves, pipes, and sinks.
2. Don't use electrical equipment that needs to be plugged in.
3. Don't use the telephone unless it's necessary.

From Philip S. Brown, "A Thunderstorm Strikes." In Science and Children, Volume 20, Number 8 (May 1983), p. 20.

Selection B

Whom Does Lightning Hit?

More than two-thirds of lightning victims are struck while outdoors. Of those killed, nearly 85 per cent are male, most of them 10 to 35 years old, which follows from the fact that young males are most likely to be engaged in outdoor activity. The largest single group of lightning-caused deaths (10 to 15 per cent of the total in most years) can be blamed on the victim seeking refuge under a tree. Of those, the biggest group is golfers. Other lightning injuries and deaths commonly occur to people who are swimming, boating and driving a tractor.

From Don Carlinsky, "Lighting." In Newsday, July 27, 1980.

C. The PREP Student and Mathematics

The learning of mathematics requires the abilities to think logically and to think in terms of abstractions. Numbers and operations are abstractions; that is, they are ideas and thus cannot be be seen or heard. But students differ widely in the ability to think logically, to think abstractly, and to make tentative generalizations based on appropriate data. Moreover, individual students differ from one time to another in their thought processes. Under conditions of undue stress students tend to become confused and may fixate on or regress to illogical modes of thought. Properly timed emphasis on situations designed for pupil success, on using objects and diagrams, and on determining readiness for learning the topic might relieve stress and guide these students toward logical modes of thought; that is, toward interest and achievement in mathematics.

Developing Mathematical Thinking

Some procedures for evaluating students' thought processes and for encouraging logical thinking in a mathematics lesson follow:

1. Provide opportunities for students to express their thinking.
   a. Students express their reasoning orally and then in writing.
   b. Students evaluate each other's responses.

2. Provide opportunities for students to exercise logical thinking by asking thought-provoking questions or challenging mathematical problems, such as:

   a. If 2 nines = 18

   Then 4 nines = ? Why?

   And 8 nines = ? Why?

   b. If 4 x 9 = 36

   And 1/2 of 9 = 4 1/2

   Then 4 1/2 x 9 = ? Why?

3. Provide a classroom setting conducive to developing thinking, e.g.:

   a. Present challenges of increasing difficulty.

   b. Expect each student to give evidence of growth in consonance with intellectual and emotional development.

   c. Emphasize the thinking process in finding a solution.

   d. Free students as often as possible from reliance on the teacher.

   e. Do not indicate immediately whether particular reasoning is acceptable.

   f. Encourage students to explain other students' reasoning.

   g. Encourage small group discussion to find a solution. Other students may listen and later evaluate.

h. Encourage students to find solutions in more than one way.

i. Encourage students to compute mentally as far as they can before they compute using algorithms (written computation).

j. Provide all students with opportunities to be challenged mathematically and to learn mathematics in every lesson.

Providing for Sequential Teaching and Learning

1. An effective way to provide for differences in pupil ability within a class, regardless of how the class is organized, is to develop the mathematics in a lesson sequentially so that all students, from the least mature mathematically to the most mature, are challenged to learn mathematics during that lesson.

2. For some students, skipping steps in a sequence brings about confusion and retards learning. For other students skipping steps in a sequence provides a challenge and facilitates learning.

Providing for Differences Among Students

To the effective teacher, the differences among the students in the class are all-important. Good teaching involves careful planning so that all students' needs may be met. It also involves understanding of mathematics, knowledge of mathematical sequences, ability to pace a lesson so that maximum learning takes place, and above all, understanding of the students within a class - their mathematical and their emotional needs.

Some considerations for meeting the varying needs of students follow:

1. Class teaching can be efficient only if the teacher develops the lesson sequentially, providing for all students within the class, if time is provided for students at all levels of ability to express their thinking, and if students at all levels of ability continue to learn and to be interested as the lesson proceeds.

2. Organizing groups within a class for separate teaching is likely to be efficient if the learning time is markedly reduced for any or all groups, if the students doing independent work are developing mathematical ideas, and if the grouping is flexible and based on continuous evaluation.

3. Some students in a class will need frequent use of and reference to objects. Other students will need only occasional use of objects or casual reference to objects.

4. Students are more likely to learn in school if they think they can learn or will be challenged in class. Immature students need to feel success in every lesson. Mature students need to feel challenged in every lesson.

5. Homework should be so planned that all students are encouraged to think, and so that differentiated abilities within the class are provided for.

   - Pupil responses to homework assignments should always be used and evaluated, e.g.:
     - Pairs of students may share, study, and evaluate their respective responses.
     - Groups of students may pool their responses after evaluation.
     - The teacher may study responses to evaluate levels of thinking in the class.
     - The teacher may select responses to develop in the class.

   - Assignments should include open-ended activities in which students' responses may all be somewhat different. For example:
     - Complete this sentence in as many different ways as you can: 3/4 - 1/2 = ?
     - Complete the following in as many different ways as you can: If 9 nines = 81, then...

6. Continual evaluation of what individual students know, understand, or can do is essential. A system of record keeping is an important part of evaluation.

7. Independent or group activities should be adapted to levels of student ability. Practice exercises should be challenging to all students.

Essential Elements

While every attempt should be made to vary the activities and the structure of lessons in mathematics, there are certain elements of good teaching that should be included in every lesson. Listed below are a number of features that each teacher should become familiar with and incorporate each day into the mathematics lesson.

- Evaluation: Progress is measured every day, sometimes in large, sometimes in small steps. The teacher monitors progress by examining students' homework, testing students' achievement on specific skills, overseeing students' board work and seat work and listening carefully to students' oral responses.

- Homework: To be as effective as possible, homework should be a daily activity. Students should come to expect homework as a natural outgrowth of each daily lesson. To communicate to students the daily importance of homework, the teacher should assign it each day, collect it and evaluate it each day, and return the previous day's homework each day.

- Problem Solving: The improvement of problem-solving skills is an ongoing, daily goal in mathematics. Teachers should include, in every lesson, a variety of problem-solving activities, such as the creation of student-made problems, the solution of warm-up problems, and the solution of challenge problems.

- Reading: Every lesson in mathematics should include reading activities. These may be in the form of newspaper mathematics activities, supplementary readings, or commercially prepared reading activities in mathematics.

- Individualized and Small-Group Instruction: Large-group, or whole-class instruction should be reserved for those times when it is appropriate to expose every student in the class to the same instruction. These are the times when new topics are being intoduced for the first time, or when it is determined that the entire class can benefit from a review of a particular topic. Instruction is most helpful to students when it is tailored as closely as possible to meet their individual needs. This means that every mathematics lesson is devoted, in part, to small-group and individualized instruction.

- Summarizing: The outcomes of every mathematics lesson, whether it be new material or review of previous material, should be summarized by students in a form which appropriately emphasizes major concepts developed. These summaries can be in the form of chalk board notes, notebook entries, step-by-step procedures expressed verbally and in writing, flow charts and vocabulary lists.

Mathematics and Reading

Mathematics requires specialized reading skills you can help students learn and practice. Because the language of mathematics is concise, students must read slowly and carefully. Many familiar words take on new, technical meanings and students must master specialized symbols. Even the usual convention of reading from left to right may have to be abandoned for algorithms, equations, and formulas. The pages that follow describe some of the reading skills needed in mathematics and how they might be taught.

READING SKILLS

I. Vocabulary

Vocabulary that is used in mathematics problems can be divided into four sets.

1. Technical words - have precise meaning unique to mathematics. Recognition of these words presumes understanding of their mathematical meaning and/or the process(es) associated with their meaning. These words may be associated with mathematical symbols. Definitions should be written in words and in mathematical symbols if appropriate. Ex.: equation, subtrahend, numerator.

2. Signal words - guide the student in finding the arithmetic operation necessary for the solution of a problem. Ex.: add, subtract, multiply, divide, least, most, less than, more than.

3. General words - are those used in everyday speech that also have special mathematical meaning, such as product, line, point, foot. The student should be made aware of each meaning. Contextual clues will assist a student in deciding the meaning of the word.

4. Utility words - are needed to understand the problem but do not have particular mathematical significance.

Teaching Vocabulary

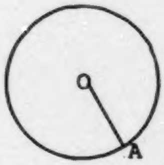
In a mathematics classroom, vocabulary usually refers to the translation of words into numbers or symbols. Too often, we disregard the words that cannot be translated or are not necessary to the solution of the problem, especailly if these words are too difficult for our students. The analysis given below is designed to give the teacher of mathematics insight into the techniques used by teachers of reading in the hope that these methods help the student in both disciplines.

A. Definitions: Each body of knowledge (topic) in mathematics has its own technical vocabulary. Be sure that students know these words before they are used in problems.

B. Dictionary use: Whenever possible, a student should be referred to a dictionary for the meaning of non-technical words.

C. Contextual clues: Using context as an aid in determining the meaning of words while one reads requires using all of the information available in the surrounding material to figure out the meaning of the unfamiliar word, or of a familiar word used in an unusual way.

   a) Pictorial clues: A picture or diagram may serve as a clue to the meaning of words. For example, in this circle OA is a radius. What is a radius?



Given: (1) Circle with O as its center.
(2) Radius OA.

   b) Nonsense words: Replace an unfamiliar word with a nonsense word or a blank and ask the class to try to determine its meaning. Many times words can be defined from the meanings of the words which surround it.

   c) Word in a sentence: The way a word is used in a sentence helps to define it. A square is different from other rectangles. Define square.

   d) Words of contrast: Teach words of contrast such as but, while, on the other hand, however.

   e) Words of reinforcement: Teach words of reinforcement such as moreover, another, in addition, furthermore.

II. Main Idea

The process of teaching the main idea involves an understanding that a series of facts or details are related to a single main thought. The main idea is frequently expressed in the first sentence of a paragraph but it may also appear at the middle or end of a paragraph. In more difficult material, a student learns that the main thought is not specifically or literally stated. A difficult problem is having the student recognize the difference between supporting details and the main idea.

A. Classifying and Categorizing

1. Present students with a list of words. Have students determine which of the words is the set; for example:

   cars
   vehicles
   buses
   trucks
   jeeps

   seven
   number
   one
   twelve
   twenty

   length
   area
   measurement
   volume

2. Present students with a list of words that belong to a set and have them name the set; for example:

   jacket
   shirt
   belt
   shoes
   scarf

   more than
   increased by
   added to
   total
   plus

   units
   tens
   hundreds
   thousands
   ten thousands

B. Sentence Classification

Present students with four sentences that are related. One of the sentences is the main idea of the paragraph, three sentences are details within the paragraph.

1. "What are all the sentences about?"
2. "Which sentence states the main idea of the group of sentences?"

Have students form paragraphs with the four sentences. Have the sentence that expresses the main idea first. Rewrite the paragraph so that the sentence expressing the main idea is the second, third, or fourth sentence (where feasible).

C. Analyzing a Paragraph

Present students with a short paragraph and have them distinguish between the main idea and details.

1. What is the main idea of this paragraph? or What are all these sentences talking about?
2. What are the details?
3. What is the relationship between the details and the main idea?
4. Are there any details missing that are needed to answer questions about the main idea?

SAMPLE LESSON

The following sample lesson illustrates how reading skills can be taught and practiced in a mathematics lesson.

TOPIC

Solving problems in banking and consumer buying that involve operations with decimals.

PERFORMANCE OBJECTIVES

Content Area Objectives

Students will be able to:

- select the correct operation and find a solution to the problem.
- solve problems involving checking accounts.
- solve consumer mathematics problems.

Reading and Writing Objectives

Students will be able to:

These objectives stress real-life applications

- define vocabulary related to checks and bank statements.
- read a word problem involving decimals, identify the given, and understand the question.
- fill in blank checks and balance sheets.
- write a business letter to order goods.

MATERIALS

Morning newspaper, sample checks, checkbook balance sheet, sample checking account statement, bank deposit slips, bank withdrawal slips.

Vocabulary: addition, sum, total; check; subtraction, difference; deposit; multiplication, times, product; division, quotient, divide up; withdrawal, overdraw; decimal; balance; hundredths

MOTIVATION

Reinforces the newspaper as a source of useful information.

Let's look at the morning newspaper. How often do we find decimals? Identify supermarket advertisements, department store ads, stock market pages, weather reports, baseball averages, help wanted columns, telephone rates, etc.

Do you think the decimal system of numeration is useful? Why?

GETTING STARTED

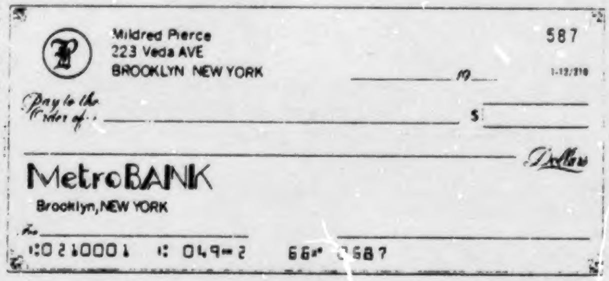
Samples are displayed to help students understand better.

Display sample checking and banking materials and discuss steps in opening a checking account:

a. Personal information card - include references and personal signature.
b. Minimum deposit.
c. Bank provides checkbook.
d. Monthly charges.

Two key words are taught.

Define the word "check" as a written order telling the bank to pay money from your account as instructed. Show students a sample check and emphasize "Pay to the Order of" as the instruction. Ask students what this term means.



Mildred Pierce
223 Veda AVE
BROOKLYN NEW YORK

587

_______ 19___

1-12/210

Pay to the Order of _______________ $ _______

_______________ Dollars

MetroBANK
Brooklyn, NEW YORK

For _______

:0210001 : 049-2 66" 0587

Questions to be Asked Prior to Lesson Development

1. How are decimals used in keeping a checking account?
2. What arithmetic operations are most often used in keeping a checking account?

DEVELOPMENT

A. Checking

1. Review addition and subtraction of decimals.

2. You receive $100 for your birthday and you open a checking account. You then write a check for $16.90. What is your new balance?

3. Since writing a check is the equivalent of a withdrawal, then it must be subtracted from your original balance:

$100.00 (original balance)
-16.90 (amount of check)
$ 83.10 (new balance)

4. You then receive a $20 check and deposit it in your account. What is your new balance?

$ 83.10 (most recent balance)
$ 20.00 (deposit)
$103.10 (new balance)

5. Other questions to ponder:

   a. Why are no erasures or changes permitted on a check? (If an error is made, the check must be rewritten.)
   b. What happens to a check you have written after it leaves your hands?
   c. What does overdrawn mean?

B. Selecting correct operations in consumer buying

1. Review multiplication and division of decimals. Sample problem: What is the price of 2 shirts at $14.98 each if the tax is 8 1/4%?

Operation			
x or +	$14.98		$14.98
	x 2	or	+14.98
+	$29.96		$29.96
	+ 2.47		2.47
-	$32.43		$32.43
-			

If you give the storekeeper $50 in cash, what is your change? Suppose 4 friends decided to share the cost of the shirts and give them to their friend as a gift. How much would each pay?

ASSESSMENT QUESTIONS

Students to practice Consumer and Speaking skills.

1. Have students brainstorm a list of questions they should ask about a bank's checking services (for example, service charge, minimum balance). Have pairs of students roleplay potential customer asking a bank service representative about the advantages and costs of a checking account.

SUMMARY ACTIVITY

Reiterate the usefulness of a checking account.

Review the vocabulary words which help us to select an arithmetic operation for solving a problem.

Review the advantages of having a checking account and keeping it in proper order.

APPLICATION ACTIVITY

A. A Trip to Florida By Car

1. Last month John Alvarez' father bought a used car for $2500. He also paid $206.25 tax, $12.50 for an inspection sticker, $18 for theregistration fee. What is the total cost of the car?

2. Write a check to the "Reliable Used Car Co." in payment for the car.

3. When the dealer presented Mr. Alvarez with the car, there were 12,675.7 miles on the odometer. After a month of driving, the odometer now read 12,962.2. How many miles did he drive in a month?

4. If the gas tank holds 22 gallons of gas, how much will it cost to fill the tank up at $1.50 9/10 (or 1.509) per gallon if the needle on the gauge shows EMPTY? How much change will the station attendant give if Mr. Alvarez pays him with two $20 bills?

5. John and his father plan a trip to Florida this summer. How long will it take them to travel 1300 miles if they drive 250 miles per day?

6. While in Florida they plan to stay at a motel for seven days. The charge there is $57.50 per day. They estimate that food for the week will cost $200, gas will cost $280, and recreation will cost $150. How much should they put into their checking account before they leave on this trip?

B. Homework

1. Distribute Worksheets A and B. Review the form of a business letter. Discuss the information that should be included in a letter to order goods (number to be ordered, total amount enclosed, fact a check is enclosed). Have students select one of the ads and write a letter and check to order the product of their choice. (The blank letter helps students to follow the correct form.)

2. Fill out the following balance sheet for the payments and deposits listed below: (Students practice writing to keep accurate records.)

	Balance of January 31		$4156.12
151	Feb. 1	Sands Realty Co. (Rent)	$ 250.00
152	Feb. 5	Bell Telephone	$ 15.25
153	Feb. 10	Franklin Electric	$ 15.43
154	Feb. 14	The Flower Ship (Gift)	$ 8.50
	Feb. 15	Deposit (Paycheck)	$ 198.52
155	Feb. 17	Cash (Lunch money)	$ 25.00
156	Feb. 19	Dr. T. Lightfoot (Dentist)	$ 20.00
157	Feb. 20	Alex Fashions (Clothes)	$ 38.50
158	Feb. 21	Pantry Kitchen (Grocerie.s)	$ 52.18
159	Feb. 22	Texas Oil Co. (Gas Credit Card)	$ 27.58
160	Feb. 25	Cash (Spending money)	$ 25.00
	Feb. 28	Deposit (Paycheck)	$ 198.52

CHECK NO.	DATE	CHECK ISSUED TO OR DESCRIPTION OF DEPOSIT	DEPOSITS AMOUNT		AMOUNT of CHECK		✓ T	BALANCE	

3. Record the deposits and checks you think you might make the first month you are "on your own."

CHECK NO.	DATE	CHECK ISSUED TO OR DESCRIPTION OF DEPOSIT	DEPOSITS AMOUNT		AMOUNT of CHECK		✓ T	BALANCE	

3. Write a check to Macy's Department Store in payment of your June bill in the amount of $120.75. (students practice writing a check correctly.)

587

____________ 19____ 1-12/210

Pay to the Order of ________________________ $ ☐

______________________________ Dollars

MetroBANK

Brooklyn, NEW YORK

For ________________ ________________

⑆0210001⑆ 049⑈2 66⑈ 0687

Worksheet A

Dear ____________________

Very truly yours,

WORKSHEET B

587

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Pay to the Order of ________________________________ $ ☐

____ Dollars

MetroBANK
Brooklyn, NEW YORK

For ______________________ ______________________

⑆0210001⑆ ⑆ 049⑉2 66⑈ 0687

Ads

Case things out

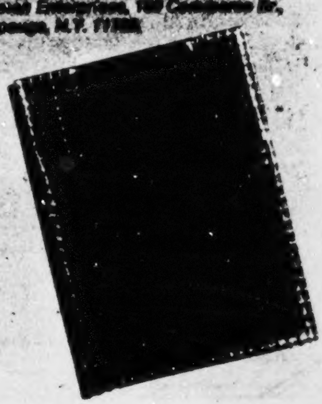
This fluted plastic briefcase, with elasticized closure, is perfect for toting school supplies. Slick for storage, too. Choose black, red, blue, yellow, green, or clear; 14¼ by 9½ by 1 inch; $4.50 plus $1.75 postage per order. *Amdurable, Box 811, New York 10026.*

Rain check

These rubber skimmers are a sure shoe-in for rainy days . . . and sun days! Choose black, white, red, pink, gold, cobalt, or peacock; whole sizes only 5-10; half sizes, take next size; $18 plus $1.50 postage. *Esprit, 900 Minnesota St., San Francisco, Calif. 94107.*

Check it out

See-through clipboard folder protects your papers without concealing the [illegible]. Select red, green, yellow, or blue clear; 9½ x 12½ inches; $7 plus $1.50 per order. *[illegible] Enterprises, 1[illegible] [illegible] Dr., Hauppauge, N.Y. [illegible]*



How to order by mail

- Send a check or money order (obtainable at the post office) directly to the address listed with the item. *Do not send cash.*
- Include your name and address, size and color choice.
- Prices include postage and tax, unless otherwise indicated. No CODs or stamps.
- Readers outside the United States: Write to address given to find out additional postal charges.
- Returns are accepted on all but personalized articles.

Clock it . . .

. . . in your locker, by your make-up mirror, or wherever you need to be on top of the time. Velcro mounted, this cream digital clock alternately flashes time and date; 1½ inch diameter by ½ inch; one year replaceable battery included; $5.50 plus 75¢ postage. *Bruce Bolind, S-9 Bolind Building, Box 9751, Boulder, Colo. 80301.*

Be calculating

Make any mathematical problem more fun with this colorful abacus calculator. Grey, with green, white, and yellow function keys, its slim 4½ by 2½ inch size makes it easy to carry around; $16.50 plus $2 postage. *Conran's Mail Order Division, Dept. SV9, 145 Huguenot St., New Rochelle N.Y. 10801.*

These experimental curriculum materials for the High School PREP program are, we hope, only the beginning of an on going curriculum development process.

We would appreciate your help in evaluating these materials with your staff.

We would like to have the questionnaire below returned to this office by December 1, 1983. Your comments, suggestions, and revisions will be heeded and appreciated.

……

1. To what extent are the suggested learning activities useful in attaining the objectives of the course? (Check one)

Very useful__________ Somewhat useful__________ Only slightly useful__________

Comment____

____

2. What organizational changes would you suggest for any revision of this bulletin?____

____

3. What content changes would you suggest for any revision of this bulletin?____

____

4. What other suggestions and modifications do you recommend? (Use other side of sheet, if necessary)____

____

____

Name______________________________ Position____________________

School____

Address____

……

Dr. Morris Freedman, Director
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Division of Curriculum and Instruction
131 Livingston Street
Brooklyn, New York 11201